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March, 1944

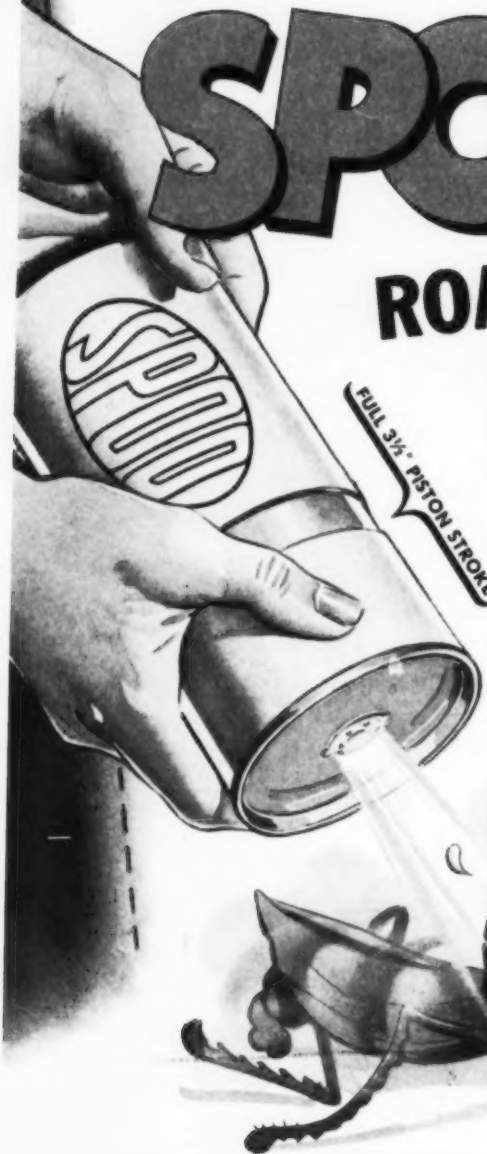
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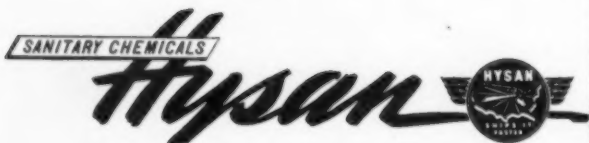
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# SOAP

*and*

## SANITARY CHEMICALS

Reg. U. S. Pat. Office

MARCH  
1944

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March, 1944

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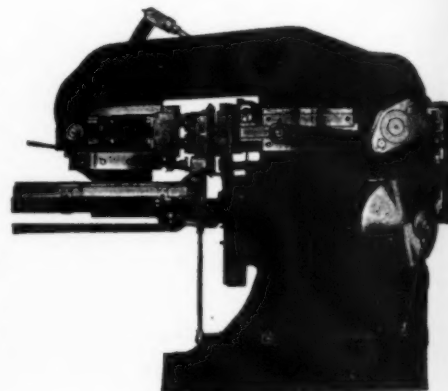
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## AS THE EDITOR SEES IT

**F**EARS on the part of some soapers that they would in the very near future be forced to use fifteen per cent or more of linseed or castor oils in their over-all soap manufacturing operations, have to some extent been allayed. Although there has been no change in the policy of the War Food Administration to encourage increased use of these oils in the soap kettle, the assurance has been given that no order will be issued requiring their use until after July 1 at least.

Future policy in regard to an order by W.F.A. remains open, but it is still unlikely that any linseed-castor oil order will be issued unless the soap industry through its advisory committee requests such an order. As has been pointed out by W.F.A., the only reason for suggesting the use of these oils is to enable soap manufacturers to obtain sufficient oils and fats to operate at maximum quotas. If soapers would prefer to run at reduced quotas under FDO 42 rather than use linsed oil, W.F.A. appears to have no objection. In short, unless the industry requests an order making the use of linseed and castor oils mandatory, W.F.A. has no intention to issue one.



**A**BOUT a year ago, the soap industry was pretty gloomy over 1943 prospects for oil and fat supplies. But with close to eleven billion pounds domestic production and a marked increase in imports, most soapers managed to get by. For 1944, the outlook continues to show improvement, even to a greater extent than was noted over the last few months of 1943. The Department of Agriculture states that domestic production will run about 11.2 billion

pounds and that imports are expected to show a further increase. Against this increase, there is the expressed belief that the fat needs of our military forces and lend-lease will take materially increased quantities over the balance of 1944.

Given an even break on weather conditions, we will hazard a guess that under present conditions—and not discounting the manpower shortage in agricultural areas—domestic production will end the year closer to twelve than eleven billion pounds of oils and fats. And, as for our imports, we have always been somewhat amazed at the manner in which a nine-cent price will find a way to get oils to market where at half of this price, supplies, shipping space, et al., are so difficult to find. All of this leads us to feel that before the end of 1944, we may be looking for tank space, and that if there are not as heavy lend-lease shipments as anticipated, we may find ourselves temporarily embarrassed by our hoard.



**W**HILE the production of corrugated and fibre shipping containers has been running behind orders to the extent of several thousand tons per month, the demand for all sorts of paper-base containers for shipments of materials to the armed forces and on lend-lease is reported from Washington to be increasing steadily. This appears to leave manufacturers of soaps, and a thousand and one other commodities, squarely in the middle. Such reports as come out of the Containers Division of W.P.B. in Washington are not too optimistic regarding the outlook.

For over a year, the soap industry has

been giving serious thought to the shipping container problem. Paper board weights have been cut, and cut again, and have now, according to what appears to be unanimous opinion in the industry, reached the minimum weight for practical shipping purposes. Already shipping losses of soap products have mounted as a result of the inadequate protection afforded by the lighter weight boxes. Container re-use is still being studied and, while approved by some, is opposed as impractical and uneconomic by others.

All and all, the soap industry is face to face with a container problem which is just about as serious as the shortage of fats and oils a year ago. That make-shift arrangements will be made by some soapers is likely, for example, bulk chips and powders in barrels, a la 1932-33 style, to be weighed out by the grocer, or multiple wrapping of toilet soaps; but these will not go very far in solving the problem of shipping and distributing over three billion pounds of soap products per annum. From our observations, we feel that the soap industry has been far ahead of the majority of industries in attacking the paper shortage problem and acting to solve it. This, we trust, will not be overlooked in Washington.



**R**EFRESHING indeed is a recent advertisement for Listerine shaving cream which comes out flatfooted against the use of the word, "pleasure," in connection with advertising of any shave cream. They head their copy . . . "An ad for reasonable men only . . . who prefer billows of lather instead of billows of claims." And it goes on . . . "Each man learns that shaving at best is a nuisance and a bore. And . . . the word pleasure shouldn't be mentioned in the same breath with shaving."

After having read for years the advertising drivel about shaving creams, and what they would and would not do for my

complexion, it was good to see a new angle of approach *sans* the old baloney, and to read about a shave cream that is "guaranteed not to make shaving a pleasure."



**N**OT more than a year ago, the idea of making almost everything from crude petroleum had a large gush of publicity. A dozen and one products of wide use were to be synthesized from petroleum. Not the least of these in degree of interest to the soap industry were fats and fatty acids. In fact, fatty acids from petroleum had been manufactured for several years in a pilot plant of one of the large oil companies in Louisiana, and had been tried out by a few soap manufacturers. This oil company, incidentally, had nothing to do with the publicity. Its source or reasons, we do not know, but it promised big things. Eventually, oils and fats for the soap kettle would be products of synthesis and our present sources of animal fats and vegetable oils would be outmoded.

And then out of the blue about a month ago, came the startling news from Washington that American petroleum reserves were low, very low, and that another twenty years at present rate of use would see them exhausted. We must begin to look to other sources for our gasoline and lubricants—our large shale oil deposits, the Near East, South America. But what of all this synthesis of glycerides and fatty acids, and so forth?

To mention that we were shocked by this turn of events is to put it mildly. Where we had thought that maybe all oils and fats in time would come from petroleum, we now begin to wonder if the tail is about to begin to wag the dog. Maybe the time is coming when gasoline and lubricating oil will be synthesized from vegetable oils or fish oils or other glycerides. The publicity boys should be turned loose to dream this one to a happy ending!

# ESSENTIAL OIL OUTLOOK...

**With the Axis still in control of major pre-war producing areas, continued shortages of perfuming materials must be anticipated**

**W**HAT is the outlook for further supplies of essential oils for the soapmaker during the coming year? The answer to that question would not be difficult, if one were a military expert. But we do not profess to know how far on the road toward victory in Europe and the Far East our fighting forces and those of our Allies will be by mid-summer or by next winter.

Will the Pacific strategy be based on the controversial "island-hopping" technique, and if so, will our men have regained control of the Dutch East Indies? Will Yugoslavia and Bulgaria still be in the war? Will there be commercial trading with Italy, Sicily, Madagascar? Only the ability to answer these questions can tell us whether there will be fresh supplies of citronella, lemongrass and lavender oils in 1944.

In these short remarks, we shall assume that the coming months will not see the end of the war either in Europe or Asia, and that even if the rest of the Italian mainland, as well as Southern France and the Balkans, are regained from the Axis, the commercial exploitation of our military victories, in the near future, is unlikely.

In the uncertain situation which we now face, outstanding interest is found in the possibility of a resumption of normal trade with territory under the control of the French National

Committee. It is now well over a year since the British and American invasion of Madagascar and North Africa, and thus far no substantial amounts of perfuming oils from these territories have reached our shores. For the soap industry, Madagascar and its little neighboring island, Reunion, could offer sufficient quantities of vetiver, patchouli, geranium, bergamot, cloves and ylang ylang to normalize our market and meet the country's demands.

In the early days of the invasion, military operations were felt to be hampering any effort toward normal trading. Later, we were confronted with serious diplomatic difficulties, and for a long time, the submarine menace created an acute shipping shortage. These are today all minor factors in the French picture.

It is generally believed that there are some interesting quantities of the Bourbon and Madagascar oils at the origin. With an accumulation on hand, with shipping space available and American offers abundant, what prevents the transaction from being completed?

As we see it, the French point-of-view is one that conflicts sharply with American interests in this matter. The French probably feel that they will return to the continent to find a barren and starving land, denuded of its wealth, its machinery destroyed from bombing, from German conversion,

*By Edward Sagarin*  
*Givaudan-Delawanna, Inc.*





from disuse or from seizure. At such a time, the French believe, all the natural resources which the colonies can offer to metropolitan France will be critically needed to rebuild her industries, while exportable products will be needed to create a favorable balance of trade. Essential oils will then be invaluable.

Yet it is hardly likely that this is a definitive point-of-view. America likes to look at lend-lease as a two-way track; we seek to obtain, in return for guns and tanks and planes, raw materials for civilian and military purposes, not available in this land, but found within the jurisdiction of the Allies. That the French markets will remain an open question, subject to constant negotiation and discussion, goes without saying. But only the more optimistic among us expect to see supplies reach our shores in the near future.

From Spain, whence comes rosemary, thyme oil, some lavender and a great deal of lavender spike, the outlook is probably gloomier. Trading in these oils with Spain has not been satisfactory for a long time. Prices of

\* Spanish oils have been prohibitively high, largely due to the government manipulations, and trading with Spain has been accompanied by difficulties of all kinds. Today the price and shipping conditions are not better, and the diplomatic relations between Spain and America are deteriorating. The outlook, all in all, is not a happy one.

Going to the other side of the world, there is a little hope for supplies of oils coming from the Dutch East Indies, the main source of supply of citronella Java, and an important supplier of vetivert, patchouli, cananga and other oils of interest.

For quite some time, it looked as if the British Indian market might also be closed to us, due to the shipping shortages and governmental regulations. Essential oils were originally classified by the War Shipping Administration as commodities not entitled to a specific tonnage allotment. This was later changed, and a maximum figure of 2,000 tons was set for 1943, but a limitation was placed permitting only one ton per customer per ship. Since shipping space was hard to find, and when it was available the buyer wished to make the fullest use of it, the one ton per ship order caused some hard-

*Photos (l. to r.) show production of jasmin and tuberose in Grasse, France and bergamot oil in Sicily*





*War has badly disrupted essential oil production. Many producing areas are still in enemy hands, and it may well be years after the end of hostilities before normal crops will again be obtainable. Peaceful scene at left shows pre-war production of narcissus in Switzerland.*

ship. The outlook seems to be that this limitation will be lifted.

The restrictions on tonnage and shipping space for essential oils was most strongly felt in its effect on the lemongrass market, and barring any new restrictions that may be imposed, the outlook for lemongrass is brighter than for most of our foreign materials.

WHEN various sources of raw materials were cut off in the early stages of the war by the military successes of our enemies, an effort was made to find new growers in the United States and abroad. Here in the U.S.A., it was generally understood that high labor costs and the high price of land, as compared with production costs in Java or Madagascar, made any large-scale effort to grow oil-bearing plants impractical. American lemongrass is largely a "by-product" industry, but if land had to be set aside exclusively for lemongrass, it would hardly be possible to sell the product in competition with the imported commodity.

Some experiments have been made in recent years on American geranium, American oakmoss, and other oils and resins, but no commercial success has rewarded these efforts.

On the other hand, the South Americans, and particularly the Brazil-

ians, have used the difficult foreign situation to enter this interesting market. Brazil has grown bergamot, though of a disappointing quality; geranium (but the Russians came through with more success; perhaps it was a case of empty ships that sought a cargo); and peppermint, from which some menthol is expected in this country.

However, the greatest interest in Brazil as a supplier for this industry has been in its production of bois de rose. From the river port of Manaus, there used to sail the greater part of the world's production of rosewood oil, the soapmaker's valuable perfume material. It is a long time since one of these shipments has reached our shores. The price set by the Brazilian authorities remained a bone of contention for a long period; then it was argued that, by stopping the production of rosewood, Brazilian labor was being deflected into the tapping of rubber trees, and the only way to stop rosewood production was to refuse to permit the purchase of the oil already on hand.

The hopes of buyers fluctuated for many months. There were reports that import licenses would be granted, but at the last minute they were always denied. Finally, such licenses were obtained, and today it can definitely be stated that a large supply of bois de rose is en route to the U.S.A.

THE essential oil picture thus adds up to a huge question mark for the soapmaker. The American soap industry, essential to the life of the country and to the health of our armed forces, is the world's largest user of essential oils, their derivatives and isolates. And though this great industry has had to go without new supplies of

oils, it has not gone without excellent perfumes. Our soaps have not shown the war-time deterioration in quality so prevalent among consumer goods today. Soaps have as pleasant an odor as ever; they do not turn rancid or discolor.

The soapmaker's achievement is all the more remarkable, considering the huge production program, and taking into account that many fats and oils hitherto used by the industry are no longer available. How has this been done?

Obviously, we have had to dip into our stockpiles of essential oils. Our inventories were probably higher at the time France fell than they had ever been before, and they are probably lower today than in many a year. There have also been changes in formulas, substitutions of aromatic chemicals, when available, for essential oils, not available. And some stocks have come in from South America, Russia, India, to supplement meager domestic production.

But it was primarily through the ingenuity of the chemist and the artistry of the perfumer that the soapmaker's perfuming problems have been solved. The synthetic aromatic chemical industry has come forward with duplications of most of the missing oils, and many of these artificial simulations have been excellent replacements for the natural products. Thus the synthetic (or, to be more accurate, artificial) geraniums and bergamots will very likely find a permanent place in the formulae of the soap industry. These products will have in their favor a stability of price and quality which cannot be matched by fluctuating markets and changing harvests.



# SHAVE PRODUCTS

**B**RUSHLESS shaving creams, approximately twenty-five years on the market, having gradually closed the sales gap between themselves and the other types, lather creams, soaps and sticks, are now outselling all other types of shaving preparations. Estimates vary slightly as to the exact ratio which ranges between 54 and 58 per cent of the total for the brushless as compared with 42 to 46 per cent for all other types of shaving products, and which do not include the skin conditioners, after shave lotions, talcs, etc. This gain on the part of the brushless creams is quite remarkable considering that as recently as ten years ago, the lather type product was outselling the brushless cream by something like two to one.

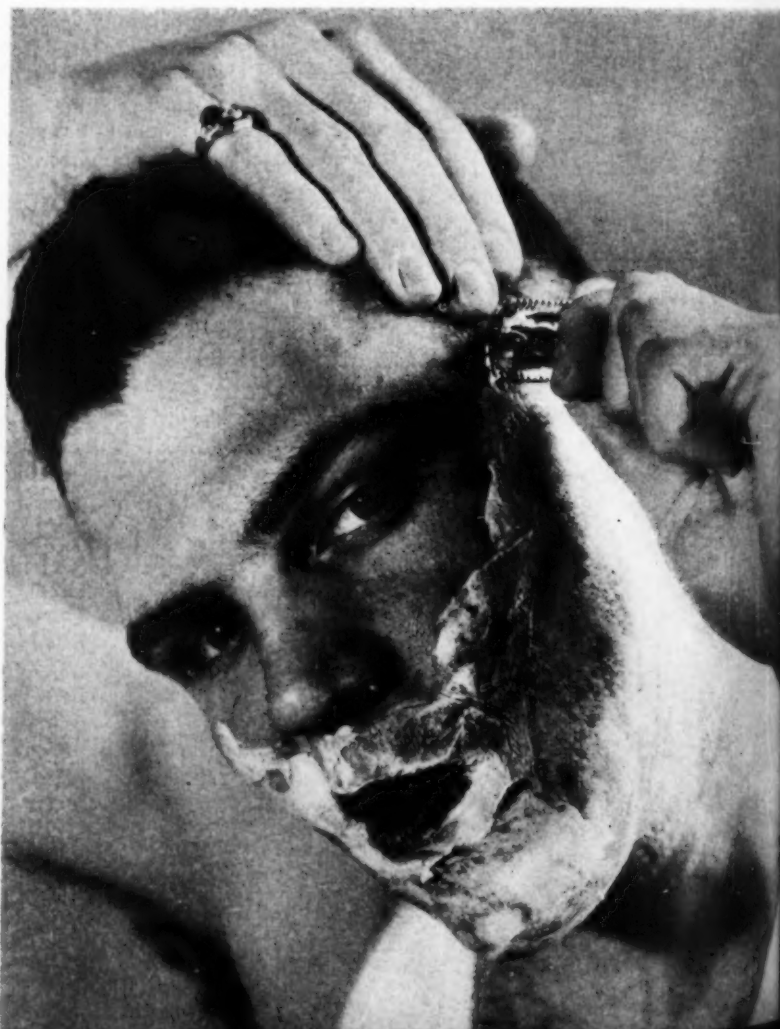
Before attempting to report the reasons assigned to the growth and popularity of the brushless shaving creams, there is a factor bearing on this whole situation which is important in maintaining a balanced view of the highly competitive shave preparations market. This factor is, at the same time, a sort of secondary explanation for the percentage increase in the volume of brushless shave creams that are being sold. This is the shortness of the average life of the tube or jar of brushless shave cream compared with the life-span of the lather cream, soap stick or soap shaving bowl. So, while the volume of brushless shaving creams sold has risen rapidly, the number of users is not as great percentage-wise as the figures for total sales volume would seem to indicate. In fact, it is thought by a spokesman for one of the large brushless cream manufacturers that there are fewer users numerically of the brushless creams than the total for the other types of shaving preparations. This is not to say that brushless shaving creams are

not growing in popularity among shavers; they are, both individually and collectively. Their growth, however, would seem to be more gradual than volume figures indicate.

Also to be borne in mind when looking at the shaving cream or soap market is the fact that while the figures for total volume are based on the national picture, there are sectional variations as to preferences, etc. Thus, brushless creams are most popular on the west coast; are least popular in the south; very big in the mid-west and slightly less popular in the east than in the mid-west.

A further breakdown of the market for shaving products reveals that this one of three most highly competitive products said to do a factory sales volume of \$16,000,000 annually, is divided roughly into two categories: (1) those made by companies who specialize in shaving preparations almost exclusively, and (2) those which have been added to an already established line of soaps and toiletries of other types. Into the first group, generally speaking, fall the bulk of the biggest selling items, which are in the medium-price brackets. The second group, in the main, are not volume

*Brushless shaving creams, comparative newcomers on the market are now reported to be outselling lather type creams.*



## A study of the market which shows brushless creams now outsell all other types of shaving preparations

*By Frank Reilly*

items, and have a strong class appeal, with considerable emphasis on better-priced sets. The first group would include such names as: Colgate, J. B. Williams, Mennen, Burma Shave, Molle, Barbasol, Ingram's, Gillette, Lifebuoy, Noxema, Fitch, Listerine, etc. It is from this group that the ten leading brands would come. The second group probably includes the names of Squibb, Seaforth, Yardley, Shulton, Coty, Woodbury, Chermay, Houbigant, Mem, Lenthéric, John Hudson Moore's Sportsman line, "Batter Up" line of Sportline, and the like. It is to this latter group that one looks for the ingenious packaging effects that have been so popular recently because of the upsurge in sales of gift merchandise especially for men in service. There is still another category of shaving preparations that has been overlooked thus far, which is believed to be an inconsiderable factor in the market, but which, in the interests of completeness should be mentioned. This category covers store brands such as those made for the large syndicate department and drug chain stores. These closely simulate in packaging and general appearance the nationally advertised brands and are "pushed" in those stores that carry them at the expense of nationally advertised brands. In recent years there has been considerable effort put into store brands, but, as a result of the war, this has naturally had to be somewhat curtailed. The price factor

has been an advantage in the case of store brands since shaving preparations, like toiletries, are price fixed. In checking with retail stores selling both store brands and nationally advertised brands, there was an unbroken unanimity in the replies to the question of what shaving preparations sold best. Always the store brand was the best seller. So that, while these store brands fall into the "all other" category, they are, taken as a group, a factor to be reckoned with.

Although all shaving cream (brushless and lather), soap and stick manufacturers report increases in volume of sales, there are no authoritative figures on which to base any general conclusions. However, even in spite of difficulties encountered in obtaining raw materials, packaging materials, labor, etc., it does seem likely that there has been an increase in the volume of sales of shaving preparations, restrictions notwithstanding. There are a number of reasons why this should be true. Since the biggest increase in volume of sales is in the brushless shaving cream category, it might be well to look over the reasons for increases in this group first.

From the time of A. J. Crank's brushless cream (thought to be the first on the market) up until the present, there has been a continuing growth in time, effort and money put into the promotion, advertisement, display and sale of all shaving creams. It is par-

ticularly true of the brushless cream, many of which now have advertising efforts devoted exclusively to them. This is true in the case of the Mennen, Colgate and Gillette brushless shave creams. Each has a radio program advertising its sale exclusively. In other words, as the spokesman for one of the largest brushless shaving cream firms put it, the success of the brushless product may be summed up in the word "promotion." This "promotion" effort has been particularly concentrated in the past five or six years, which may go far toward explaining the popularity of the brushless cream.

Since, as has been mentioned before, the brushless shaving cream does not last as long as the other types of shaving preparations, there is a bigger repeat business in a given time with the brushless than with the other shave creams. Naturally, the dealers are eager to promote its sale. Because most of the lather type creams are packaged in tubes and many of the brushless shaving creams are packed in jars—57 per cent, according to one estimate—the requirement that a tube had to be exchanged for a tube purchased hurt the sale of lather creams.

Convenience is another oft advanced reason for the brushless popularity. Under the "convenience" heading come such assorted ideas as: "most people don't want to be bothered with a shaving brush," or, "shaving brushes are now hard to obtain," or "with so many people traveling and using crowded washrooms in trains, the less shaving equipment the better (which means shaving brushes)"; and, finally, "with soldiers in the field, hot water is difficult, if not impossible, to obtain, and since lather type shave creams require hot water, the brushless gets the nod." Others say that the brushless cream is better for the tender skin, and using brushless cream it is easier to avoid cutting oneself when shaving. And, finally, perhaps even those witty little Burma Shave verse signs one used to see along the roadside in the country when gas was more plentiful, might have contributed something to the increased sale of brushless creams. And then, too, "Singin' Sam, the Barbasol Man" with his "Just Wet Your Razor



and Begin . . ." theme song helped to popularize the notion of a brushless shaving cream.

ON the other hand, the manufacturers of the shaving bowls, mugs, and sundry other shaped shaving soap containers have contributed something to the lore and legend and consequent popularity of the soap and lather idea in shaving. These variations on the theme of father's or grandfather's shaving bowl, the one that used to be left in the barber shop, probably began with the advent of the wood shaving bowl. This fairly recent innovation came as a departure from the tube idea which marked a definite transition away from the shaving "mug" idea. The wooden, soap filled shaving bowl idea modernized the old ceramic bowl idea and pioneered the way for a number of new variations on the same basic theme. One of the first of the wooden bowls to be introduced is believed to have been brought out by Yardley. The idea met with a fairly broad response, and was widely imitated. At first, it was sold almost exclusively as a set item, usually with shaving lotion and talcum. In more recent years shaving bowls have been sold individually, retailing from about 50 cents to \$1.25.

The wooden shaving bowl then, whose ancestry traces back to the "shaving mug," is itself the genesis for the many of the newer "bowl ideas" that keep springing up from time to time. In the last two or three years these "bowl ideas" have been broadened both as to numbers and to the variety of clever and appealing ideas embodied in packaging styles. Shaving mugs or bowls carrying Currier & Ives lithographic designs, in the shape of duck decoys, and old-fashioned sailing ships; whisky jugs, kettle drums and bowls whose tops are designed with seams like those on a baseball and with a miniature golf or baseball handle have been introduced recently. These items are usually boxed very beautifully individually or in sets with strong masculine appeal and retail from one dollar to seven dollars. With so many men going into the armed forces the demand for gift

sets has risen and practical items like shaving sets are in good demand. Excess purchasing power has helped boost the sales of the better priced merchandise.

In the volume sales group, which was referred to as the first group, there are gift shaving sets for holiday sales. Although not in this category as far as volume is concerned, Shulton, Inc., New York, makers of the "Old Spice" line of toiletries for men have a dollar package that has sold well. It contains a tube of brushless shaving cream, and a tube of powder. Because of its lightweight and package dimensions a great many of these sets have been bought by and for service men. It is popular for shipment overseas.

In speaking of shaving sets, however, it must be remembered, as one manufacturer pointed out, the average man does not buy a set when he needs shaving cream. In most cases he buys a tube or jar as the case may be at 50 cents, 75 cents or one dollar. That's where the bulk of the shaving cream business is. In some cases, a man will buy a shaving bowl costing around a dollar. Since many manufacturers of the bowl or "mug" type shaving soap packages make refills for their packages, the bowl is in a better position to compete with the other forms of shaving soaps. These refills retail around 50 cents, as against a dollar or \$1.25 for the bowl and soap. The refills are usually for the ceramic type bowl or "mug," since the wooden bowls do have a tendency to warp or become misshapen so that it is practically impossible to make a satisfactory refill.

Although not regarded as occupying a dominant spot in the shaving preparations market, the soap stick seems to be enjoying an increased vogue recently, particularly among service men. This upward trend among the shaving sticks has been mentioned by manufacturers and confirmed by retail stores. They say the service men like the sticks because they are compact; they fit right into most of the many toilet kits made for service men. Another factor in their favor is that they are neat in appearance, whereas a tube, after some use

begins to look rather sloppy. The sticks, formerly packaged in some sort of metal tube, are now almost all packed in a wax paper within a lithographed cardboard tube. In general, the sticks are of the lather type shaving soaps, and are consequently applied with a brush. There is an exception to this in the case of the "Slick Stick," made by the Delland Corp., New York. The "Slick Stick" is applied directly to the face without the necessity of using a brush. After application of the "Slick Stick" the face is washed off, and then shaved. "Slick Stick" retails for 50 cents and, it is claimed, will last about three months.

Colgate has discontinued their shave stick. A prominently mentioned stick, and said by retailers to sell well, is that made by J. B. Williams Co. Yardley reports that their stick is popular with service men, and for a time, when their bowls were temporarily out of stock in some stores, the stick was said to have sold well in their place. Mennen, another of the better known names in shaving preparations, has discontinued its sticks and bowls, which reflects the importance placed on those two items by the company, and at the same time reveals that what is said for one brand of a product is not universally true of all the brands in a group. It may also indicate a desire on the part of a manufacturer to specialize more in one type of product, say the brushless, than another, bowls, sticks, etc.

APPARENTLY, shaving creams, like so many other advertised products, have "gone to war." At least a goodly percentage of them have. One of the largest manufacturers reports that 80 per cent of his products are being bought for government purposes, with only 20 per cent left for civilian uses. Although the figure on the amount being purchased by the government may be a little higher than average, it is known that a large quantity is being shipped overseas for our service men, and those of some of our allies. In addition, a large stock pile is said to be being built, all of which

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# LINSEED and CASTOR OILS....

Can they be used successfully by the average manufacturer in appreciable percentages for the manufacture of potash soap?

*By Herbert Kranich*

*President, Kranich Soap Co.*



**A**FTER a review of published comment and opinions in various trade and scientific publications, and after discussing the subject with individuals in the soap industry, the conclusion is drawn that most potash soaps manufactured chiefly from the usual raw materials, as are available at the present time under government regulations, and in which are included 15 to 25 per cent of either linseed or castor oils, should not be appreciably changed in quality and stability, or should these additions materially affect the uses to which these specialized soap products can be put. However, this general broad conclusion may be accepted by the majority of potash soapers in the industry with some slight reservations among which are costs, formula changes, stability, odor, use restrictions, and so forth.

During past years manufacturers of potash soap specialties always deemed it expedient for cost considerations to utilize, to advantage, those raw materials that from a price level were lowest, and through some interchangeability of the vegetable oils such as corn, soya, cottonseed, linseed, coconut, etc., or their fatty acids, were permitted a wide latitude. Unless they averaged out their raw material costs in this manner, irrespective of formulas or manufacturing procedure, competitively they were at a disadvantage. This interchange of raw materials naturally produced many varied products.

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**A**LTHOUGH there is no contemplation of the compulsory use of linseed and castor oils in the soap kettle by the War Food Administration at present, which is in accord with strong opposition by the Soap and Glycerine Industry Advisory Committee,—the possible voluntary use of these oils on a wider scale when and if the prices are "right" presents an interesting controversy. Mr. Kranich holds that they can be used successfully more widely in potash soaps. But today, he notes, their prices are too high in comparison with other oils and fatty acids to be used economically in soap manufacture.—The Editor.

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Linseed oil, so much in the soap industry spot-light today, is obtained from the seed of the flax plant, *Linum usitatissimum*, which is extensively grown in Argentina, Canada, India, Soviet Russia and the United States. Cold pressed oil is produced in the foreign countries where it is used widely for edible purposes as well as industrial. Most of the oil obtained in the United States is hot pressed. Raw linseed oil contains as impurities, small amounts of proteins, inositol phosphates, organic coloring matter, carbohydrates and other non-oil substances. Alkali refining removes the mucilage, coloring matter, etc., etc., and definitely improves the oil for soap making. If further bleached with carbons, fuller's earth or other clays (2-3 per cent), a very superior white stable oil is obtained excellent for potash soap production. Its characteristics are for the soaper, Iodine

No. 170-202; Saponification Value 189-196; Unsaponifiable .5-1.6 per cent; Titre of fatty acids 19-21° C.

The use of linseed oil in amounts varying from 15 per cent to 25 per cent blended with the other various oils or their acid derivatives, should not change to any great extent the finished product and in some instances may possibly improve it, especially figging in the winter months. The use of linseed oil should assist in the production of soaps made solely from fatty acids by having present in the batch a sufficient percentage of neutral oil for subsequent smooth boiling for those not having proper mechanical equipment for the manufacture of soaps when using fatty acids alone. Stability and odor when using these limited proportions of linseed oil are not too serious a drawback.

It is understandable of course, that an alkali washed linseed oil is superior to the crude product. Also slight additions of inhibitors of which there are several on the market, or oxygen acceptors such as rosin, may almost completely eliminate the over-emphasized criticism of linseed oil that it is prone to develop a fish-like odor. In passing, the use of double distilled linseed oil fatty acids may be used as a 100 per cent stock and the finished soap is comparable in all respects to one that would have been made from corn, soya, cottonseed oils, etc., as to its physical properties, its texture, stability and odor. This all leads to the conclu-

sion that linseed oil has been and still is a satisfactory raw material for the potash soap manufacturer, and the main concern to most, at the present time, is not the character of linseed soaps, but the high price level of this oil when compared to other available raw materials.

Castor oil, likewise much discussed as a soap kettle candidate today, is obtained from the seed of the plant, *Ricinus communis*, and is grown in most tropical and some temperate regions. Castor oil of commerce is of two grades, No. 1 or C.P., a clear water-white oil low in fatty acid, and No. 3, higher in fatty acid content and of a yellow to greenish color. Its characteristics for the soaper, No. 1 grade preferable, are Iodine No. 82-90; Saponification Value 177-187; Unsaponifiable 0.3-0.7 per cent; Titre of fatty acids 4.9; Acetyl value 146-150. Castor oil soaps dissolved in large amounts of water dissociate to a lesser degree when compared with other vegetable oil soaps. When blended up to approximately 20 per cent with other vegetable oils, potash soaps so made have their lathering and solubility properties greatly improved when used in cold or tepid water.

The use of castor oil in the past by the potash soap manufacturer was not as widespread as the use of linseed oil because of its relatively high solubility as a soap. However, it is an excellent raw material to blend with coconut oil for the production of liquid toilet soaps (hand and shampoo) and may be used up to 25 per cent without materially affecting the copious lather characteristic of straight coconut oil products. The addition of castor oil in this type of soaps markedly improves the rinseability of the finished products and at the same time has that particular property unto itself of eliminating to a marked degree the so-called "bite" against which much criticism of coconut oil shampoos has been brought to bear in the past. Being a very easily saponified oil it assists commensurably in the saponification, when blended, of other vegetable oils and fats, while in the finishing of soaps a proper alkaline balance is more readily obtainable. When castor oil is used in

formulas for making paste or hard potash soaps, its use changes the physical characteristics of these products tending to make them softer. This and its price level are possibly its chief present disadvantages.

The use of 15 per cent or less of linseed oil in the general formulas for the manufacture of potash soaps such as hard (62-70 per cent) paste (40-55 per cent) soft (30-40 per cent) liquid (10-30 per cent), scrub soaps, etc., should not materially affect the manufacturing procedures or alter to any great degree the characteristic properties of the finished soap products. In all cases it is important that proper total saponification and free alkali balance, as important details, must be carefully watched to avoid subsequent rancidity and objectionable odor.

The use of linseed oil and castor oil in liquid toilet soaps again should not materially affect manufacturing procedures or markedly change the normal characteristics of these finished products. The main consideration in the use of these oils in liquid toilet soaps is the proportion to be used. Of interest, alkali washed linseed oil blended with No. 1 castor oil and coconut oil in the ratio of 25 per cent linseed, 25 per cent castor and 50 per cent coconut oil if properly prepared and aged, has at the time of filtration a somewhat slight heavy, but not fish-like odor. This odor present in the freshly filtered product decreases on aging until it becomes almost imperceptible, possibly because the latter forms aldehydes of the coconut oil blend and masks the odor. Experience with red oil on the contrary in the same or larger amounts under similar conditions, indicates that the soap never quite loses its characteristic heavy odor. Utilizing other types of oils or fatty acids under similar conditions, the heavy odor has been overcome successfully by use of excellent odor "neutralizers" now on the market. These have been developed by the American perfuming materials industry to mask this residual odor so that no matter what blend of raw materials is used the finished soap when manufactured properly is bland and "sweet" and acceptable to the ultimate consumer. All told, it

would seem that the use of linseed and castor oils, alone or blended, for the manufacture of potash soaps in percentage up to 15-25 per cent of the total amounts of fats used should not present difficulties unsurmountable by the producers of these special soaps.

### Detergency in Sea Water

It has been necessary to turn to the use of synthetic detergents for washing in sea water. A 0.32 per cent solution of "Santomerse" of a grade containing over 99 per cent of active ingredient has been found to give good detergency in sea water. Other grades containing a lower per cent of active ingredient must be used in proportionally higher concentrations. This product is an aryl alkyl sodium sulfonate, consisting essentially of dodecylbenzene sodium sulfonate.

A combination of "Santomerse" with trisodium phosphate or with tetrasodium pyrophosphate is a more powerful detergent than "Santomerse" alone. The concentrations indicated are 0.2 per cent of builder to 0.08 per cent of "Santomerse." Soap plus "Santomerse" is more effective than "Santomerse" alone, using from 35 to 60 per cent of soap in the combination. This seems to be due to the increase in pH rather than to the detergency of the soap. Cleaning appears to be best at about a pH of 10. The soap-"Santomerse" combination is most effective in 2 per cent solution. Soda ash also increases the detergency of "Santomerse" in sea water, using 0.67 of the former to 1 part of "Santomerse." Jay C. Harris. *ASTM Bull.* Dec., 1943.

### Soap in Lubricants

Insoluble metallic soaps such as those made by the interaction of calcium or aluminum with fatty acids, are standard components of lubricating greases. However, sodium soaps are also highly valuable, notably in contributing to the desirable properties of heavy-duty lubricants. Soda soaps may be present to as much as 5-20 per cent in these lubricants. *Bull. Assoc. Am. Soap & Glycerine Producers*, Jan., 1944.

# POTASH SOAP SITUATION...

*By Russell H. Young*

*President, Davies-Young Soap Co.\**

FOR more than two years the potash soap industry has been under government control, first under WPB and now under WFA. It would be well to look back briefly over the past, and try to take a glimpse into a none-too-clear future.

At first, the regulations under which the potash soap business operated seemed very drastic. There were times when the future appeared black. This part of the soap industry is comparatively small, comprising perhaps not more than two and one-half per cent of the total soap production, although there are more than 130 potash soap manufacturers in the industry. The problems of the soda soapers and those of the potash soapers were often divergent, and with the major problem facing the government administrators that of assuring consumers a sufficient amount of soap for health and happiness, it seemed for a time that the potash soapers might be the forgotten men in the soap industry.

But they and their problems were not ignored. When it was necessary to limit potash soap production to fatty acids from vegetable foots, since the potash soapers in general were not able to recover the vital glycerin, steps were taken to make sure that there was a supply available. In this case, the soda soapers were restricted in their use of foots to an amount that they had used in the base period. The potash soapers found their raw materials sufficient for their quota.

Passing over the intervening period, today finds the potash soapers, producing chiefly industrial soaps for the nation, operating at a quota of 110 per cent of the base period, on indus-

trial soaps, and 90 per cent on sales of 25 lb. packages or less, with sales to the armed forces, soaps for non-detergent purposes, and soap sales to the converters (those who purchase soaps as a base in the production of cleaning compounds), exempt from their oil quota. True, to be exempt, sales to converters must be supported with a certification signed by the converter stating that the purchase of this soap doesn't exceed his quota. Under FDO-42, the term "manufacturer" includes converters, who must operate on their own base period quota. Should the converter desire to purchase and sell more soap than is allowed him under his quota, he must purchase the product in the form in which he sells it to his trade.

The importance of paste hand soaps has been recognized in the fact that manufacturers are allowed 150 per cent of their base period quota.

All of this must be read in the light of existing regulations as they limit quotas. These may be varied, as the fat and oil stocks and production may vary from many causes, including crops of oil bearing seeds, production of animal fats, changes in export or import conditions, demands of the armed forces, lease-lend requirements for fats and oils, and the amount of household fats that the fat salvage drive produces.

While it is true that the potash soap industry uses primarily vegetable oils, it is also true that the tonnage of these oils or their fatty acids available to the potash soaper, is in direct relation to the over-all fat supply of the nation.

By a recent amendment to FDO-33, (Glycerine Recovery Order) any soap manufacturer is permitted to use 150,000 pounds of fats or vegetable

oils in any quarter of the year without recovering the glycerine from them. However, it must be remembered that the edible oils, such as corn and soya, are under allocation. These are the oils which have entered chiefly into potash soap production in the past. Permission to purchase any of these edible oils must be obtained, and there is no way of knowing definitely how much or for how long any of these oils may be available. Feeding this nation and our allies, and feeding the peoples of Europe, as they come under our control, is of first consideration. So, it may well be that the potash soaper will find himself still restricted to the use of the fatty acids as in the past. Time alone can answer that.

## Some Vegetable Oils Available

VEGETABLE oils that do not lend themselves to edible use will be available. Most important of these are linseed oil and castor oil. Neither of them have been widely used in soap making in the past, but the situation is such that they will probably have to be used to a much greater extent in the future.

Castor oil, to about 20 per cent of the oil mix, can be used advantageously in liquid soaps and liquid shampoos, particularly if used in conjunction with coconut oil or coconut oil fatty acid. The addition of castor oil imparts a bland effect to the soap action, and in the maximum percentage mentioned, does not noticeably reduce lathering properties.

Linseed oil was for many years used extensively in potash soaps. As the production of corn and soya bean oil increased, the use of linseed oil decreased. One of its chief faults was the development of a rancid odor in the soap on aging. Today, by using the

\* Mr. Young is also Chairman, Potash Soap Division, Association of American Soap & Glycerine Producers.



proper type of refined linseed oil, and using one of the many inhibitors available, this drawback to the use of linseed oil can be largely overcome.

It is quite probable that the potash soaper may secure permission to use either one or both of these oils without removing the glycerine, in addition to the 150,000 pounds per quarter of neutral oil now permitted. Such permission can only be granted by application to the Soap and Glycerine Division, Fats and Oils Branch, War Food Administration, Washington, (25), D. C. Specific amount of each oil to be used in any month or quarter must be stated in the application.

The economic question must enter this consideration, of course. Both linseed and castor oils are higher in price than are the fats generally used today. If these two oils are to gain wide usage, some relief from present price ceilings should be granted.

#### Enough Oil for Everyone?

**P**ROBABLY—that depends on the factors stated earlier. But it would appear that, including the supply of linseed and castor oils, there should be sufficient to maintain the present quota for the immediate future, at least. Beyond that, it is entirely a matter of supply and demand—demand upon the supply, chiefly for edible usage.

It is reported that in England, 10 per cent of the total fats going into the soap kettle is required to be linseed oil. In England, however, the price of finished soap can be advanced in proportion to the oil costs. It might eventually become necessary to require the soapers of this country to use a certain proportion of their fat and oil consumption in linseed and/or castor, or the fatty acids of these oils.

If relief from present price ceilings is granted, use of linseed and castor oils would not be a great hardship to the potash soap industry. Some potash soap specifications may have to be changed. Most important is that a sufficient supply of soaps for personal and industrial use, be assured, both for the armed forces and for civilians.

As you read this, the situation regarding containers for paste and liquid soaps may already have been

clarified. On the basis of the drum survey made by the potash soap industry through the Soap and Glycerine Association covering the first six months of 1941, WFA has been able to present this problem to the container branch of WPB. It is hoped that the potash soap industry may be allotted a sufficient number of drums to permit them to serve their customers with properly packaged soaps.

#### Potash Soapers in War Production

**T**O the extent that potash soaps are used by the armed forces, these soaps have been readily obtained from the potash soap industry. The equipment of these manufacturers does not lend itself to production of powdered

soaps or bar soaps to any extent. But, this same equipment does fit in well in the production of chemical compounds, particularly of the paste or liquid types, and the industry has produced many of these materials for war use.

Necessarily, this discussion must be very general in scope, but there is an organization to which you can bring your own particular problems—the Potash Soap Division of the Association of American Soap and Glycerine Producers of America, 295 Madison Avenue, New York City 17. A. P. Federline, Secretary of the Division, will be glad to present your questions to the proper authority for an answer. As a potash soap manufacturer, it is your association to use.



## Potash Soap Questions

**A** NUMBER of typical questions on availability of raw materials, quotas, WFA restrictions, etc., of the type that have been troubling potash soap makers over recent months, were answered by Dr. C. W. Lenth, chief of the Soap and Glycerine Division, Fats and Oils Branch of FDA, at the meeting of the Potash Soap Division of the Association of American Soap and Glycerine Producers held recently in New York. The full text of the questions and the answers provided by Dr. Lenth follow.

#### I. Only Small Quantities of Vegetable Oils Available for Soapmaking

**Question:** How soon and under what conditions may the use of all vegetable oils in potash soaps be exempted from the glycerine recovery provisions of FDO-33?

**Dr. Lenth:** That is sort of a double barreled question. It is going to be a cold day in July before any substantial amount of vegetable oils will be available for soapmakers. FDA has a very small amount that it can let soapmakers have each month and it does no harm for any soapmaker to apply for these oils. FDA probably will have to cut down on some requests. The bulk of it has been soy-

bean oil. Only a small percentage will be peanut and cotton oils. To get this oil, it will be necessary for you to file Form FDA 478 as provided in FDO-29. We will not be able to make any increase in the glycerine recovery exemption in FDO-33 for a little while at any rate. In fact the quantity of whole oils you will get will be well within the 150,000 pound exemption anyway. I doubt if we will be able to raise the exemption for some time.

#### II. Some Authorizations to Buy and Use Soybean Oil in Soap have Been Granted

**Question:** To what extent, if any, has special authorization been granted to use in potash soaps in either the last quarter of 1943 or the first quarter of 1944 either whole oils or the fatty acids from a direct split of cottonseed, soybean, peanut, or corn oils?

**Dr. Lenth:** As far as the quantity of vegetable oils is concerned, in the last six months of 1943 there were about one and a half or two million pounds of soybean oil made available to the soap industry generally. That was at a time when there was some soybean oil available. We hope the same situation will come up again this summer, but we cannot promise it.

#### III. Use of Whole Linseed and Castor Oils (in Addition to the 150,000 Pound Exemption Under FDO-33) Permitted on Request



**Question:** Is it correct that when all existing FDA orders are applied, potash soapmakers are limited to use of the following fats and oils, unless otherwise specifically authorized by FDA (or the soap is hospital grade for hospital use as set forth in the applicable order):

- (a) tall oil and rosin;
- (b) raw and acidulated foots from the refining of cottonseed, soybean, peanut and corn oil, and the fatty acids derived from such foots;
- (c) fatty acids from linseed, olive, castor, lauric acid and palm oils obtained in any manner that satisfies the glycerine recovery requirements of FDO-33?

**Dr. Lenth:** There is no restriction on the use of tall oil and rosin. The same applies to raw and acidulated foots. Vegetable oils are not available to you without specific permission. They are, of course, governed by the FDO-42 quotas. It is not necessary to use fatty acids of linseed oil, castor and olive, coconut or palm oils provided you stay within the 150,000 pound exemption. Above that you will need to use fatty acids. However, we have been fairly lenient in granting exemptions on the use of linseed and castor oil as such over and above the 150,000 pound exemption. You will have to ask for specific permission, however.

#### IV. How to Be Exempted from Recovery of Glycerine from Linseed and Castor Oils

**Question:** Will Dr. Lenth please explain what potash soapmakers must do to be exempted from the recovery of glycerine from linseed and castor oils when the total use of fats and oils is in excess of the 150,000 pound exemption per quarter?

**Dr. Lenth:** The procedure to follow is to write us a letter telling us the quantity of linseed or castor oil that you want to use in addition to the 150,000 pound exemption. If the overage is linseed or castor oil, we are willing to extend the exemption further. It will not be difficult to get permission from us, but the companies seeking such exemptions must be specific.

#### V. Exemption from Glycerine Recovery of Oils Other Than Castor and Linseed (In Addition to the Quarterly Exemption of 150,000 pounds) Not Expected

**Question:** Since it is so difficult and expensive for potash soapmakers to split (or have split) linseed, olive, castor, lauric and palm oils in order to recover the glycerine therefrom as required by FDO-33, cannot this condition be dropped soon and the use of such oils whole be permitted in potash soaps?

**Dr. Lenth:** As I have already indicated, we are willing to listen to reason on the non-recovery of glycerine from linseed and castor oils. I am afraid we cannot be so reasonable

from your viewpoint on olive oil. As a matter of fact, I don't know where you will get olive oil or how you will pay for it if you do.

#### VI. When Coconut Oil Comes Within the 150,000 Pound Quarterly Exemption from Glycerine Recovery

**Question:** Does the exemption of 150,000 pounds of fats and oils from the glycerine recovery provisions of FDO-33 as amended include coconut and other high lauric acid oils?

**Dr. Lenth:** That depends on when you got your coconut oil. Coconut oil is distributed once a quarter. The smaller users have been getting six instead of three months' supply in order to avoid shipping small quantities. If you got your coconut oil before the first of the year, you got it with the understanding that the glycerine would be recovered. If you got it after the first of the year, with the release made a week or so ago, you are held only to the glycerine recovery provisions of FDO-33. In other words, you may use up to 150,000 pounds a quarter any coconut oil or a mixture of coconut and other oils. If you got it before the first of the year, under the condition that you would recover the glycerine from it, we are willing to look favorably on exceptions to that in order to put such people in the same position as those who got it after the first of the year.

#### VII. Procedure for Exemption of Coconut Oil from Glycerine Recovery

**Question:** Dr. Lenth, will you please explain to the group the procedure to follow in applying for exemption from glycerine recovery on coconut oil acquired prior to January 1?

**Dr. Lenth:** All that a company needs to do is to send us a letter stating that it received so much coconut oil under the release of a particular date and that it was permitted to use such coconut oil only if the glycerine were recovered from it. The company should then request permission to use such quantities of that oil as may be necessary to make up the 150,000 pound exemption under FDO-33.

#### VIII. Foots Fatty Acid Supply May Be Larger But Orders Should Be Placed Early

**Question:** What is the prospect for a supply of foots and fatty acids from the refining of cottonseed, soybean, peanut and corn oils sufficient to take care of the needs of the potash soapmakers in the first and second quarter of 1944?

**Dr. Lenth:** That is a hard question to answer. We know approximately how much of those fatty acids will be made. We estimate about 130 million pounds of all combined, of which about one-third will be soy and about half cotton. Whether potash soapmakers will get the fatty acids or some other soapmakers will get them is largely

a matter of first come, first served. The best procedure to follow is to get your orders in very early. I understand some orders are being delivered now that were placed a year ago. I think production is somewhat higher than last year and there is less demand for fatty acids by others than soapmakers. This leads me to believe that there is a better chance of getting fatty acids this year than there was last year.

#### IX. Soapmakers to Be Treated Same As Other Industrial Users in Vegetable Oil Allocations

**Question:** When FDA permits all industrial users of cottonseed, soybean, peanut, and corn oils to use such oils, cannot the permission be extended to include their use in potash soaps?

**Dr. Lenth:** Yes. There is no singling out of soapmakers for torture. The only industrial users who get a free ride are those who make alkyd resins. These are under such tight control that there is not going to be any appreciable leakage of vegetable oils through those channels. Practically all of the other industrial users are in the same position as soapmakers. They are in the list of prohibited uses under FDO-29. In order to obtain these oils they have to file FDA Form 478, just as I have suggested that you file it. Any opening up of oils for them will be carried along to the soapmakers as well.

#### X. Reactions to Use of Tall Oil and Rosin in Potash Soaps Have Been Mixed

**Question:** What reactions have you had to the use of tall oil or rosin in potash soaps?

**Dr. Lenth:** The reactions have been both favorable and unfavorable. Some think that these materials are pretty swell and others are rather profane talking about them.

#### XI. Red Oil Restrictions Are Being Eased

**Question:** What are the prospects for permitting the use of red oil in potash soaps during the first and second quarters of 1944?

**Dr. Lenth:** The prospects are fairly good for the first quarter. It will depend entirely on the supply of red oil. The FDA had to deny soapmakers the use of red oil for several months, and as a result of that denial, a supply was built up and it was found that these restrictions could be eased. The potash soapmakers are welcome to use saponified red oil. The new government order covering red oil should be signed at any time and that will permit the free use of saponified red oil by soapmakers and others after the 15th of each month. During the first 15 days of the month, other

(Turn to Page 117)

# THE WAY IT LOOKS IN



# Washington

**T**HERE has been no single development in the Washington outlook this past month which would seem to indicate a sweeping change in the soap maker's lot. There have been a long list of changes, however, in availability of various materials, inventory restrictions, etc., with which the soap maker must keep in touch. Two sweeping new orders which affect all users of chemical products have been issued within the month. General Chemical Allocation Order M-300, which was issued Feb. 11, will, it is anticipated, eventually eliminate the necessity for separate allocation orders on approximately one hundred commonly used chemicals. M-300 establishes a standard framework for allocation, reporting, exemptions, etc. Another important priorities development of the month was the issuance of Direction 5 to Priorities Regulation 3, February 18. The new direction advises that blanket MRO ratings AA-1 and AA-2 may no longer be used to get supplies of chemicals and related products listed in the direction (The direction lists such materials as caustic soda, potash, carbon bisulfide, pine oil, rosin, sodium compounds, vegetable waxes, and over one hundred other products). Instead of these blanket MRO ratings, it is now provided that production material ratings are to be used by those having such ratings.

What is perhaps a significant development in the price situation on soaps came with the announcement that the OPA has approved a price

by

**C. H. JENKINS**

advance on castile soap, effective March 1. The new maximum prices are 46c a pound for powdered castile soap and 41c a pound for the granular variety. These compare with former prices of 38c and 37c. Soaps covered by the new price levels must meet the U.S.P. specifications for castile soap, the sole permissible oil ingredient being olive oil. Production is currently limited very sharply by availability of olive oil which is, of course, selling, when available at all, at sharply higher than pre-war prices. OPA willingness to accept higher prices for the finished soap was said to be based on the premise that only by allowing the advance could production of castile soaps be expected to continue without loss to producers.

## Lard and Pork Fat for Soap

An important development in the raw material picture, announced late in February, was the word that the WFA is again making available for soap manufacture substantial quantities of federally inspected lard and rendered pork fat. A total of fifty million pounds of lard, and an equal amount of rendered pork fat have been set aside for soap making purposes, deliveries of lard to be completed by the

end of March, and of the pork fat by June 30. Soap makers who need ration points for the purchase of these materials should apply to the Fats and Oils Branch, Office of Distribution, War Food Administration, Washington, 25, D. C. on Form FDA-695. The recent record hog runs are believed responsible for the easier supply situation on these two materials.

## Ease Tallow Inventory Controls

An important development in inventory controls this month was the new amendment to FDO-67, liberalizing restrictions on inventories of tallow and grease. Beginning February 25, users were allowed to keep a 90-day inventory on hand, rather than the 60-day supply which had formerly been permitted. The reason for the change was said to be that current heavy seasonal production is taxing the storage facilities of producers. Within a short period, when production tapers off, it is planned to return to the 60-day limitation.

Further on the subject of inventories, the Food Distribution Administration has recently issued a series of official answers to questions concerning inventories of fatty acids. FDO-87 limits such inventories to a 60-day supply, based on the average quantity used during the last six months of 1943. The questions and answers relative to the order follow:

1. Q.—How is the inventory quota established under Food Distribution Order No. 87, Amendment 1?

A.—A 60-day inventory under the amendment is one-third of the aggregate

gate quantity of fatty acids used during the last six months of 1943. Excluded from the base period use, however, are fatty acids produced by the user, and fatty acids used under current authorization by the Director of Food Distribution.

2. Q.—Is a fatty acid which has been under allocation, but which now is not allocated, included in the base period use?

A.—Yes.

3. Q.—Are fatty acids in transit to a user considered as part of his inventory?

A.—This is determined by ownership. If the fatty acids become the user's property when taken over by the transporting agency, they are part of his inventory.

4. Q.—If a user has fatty acids produced for him under a toll agreement, are these fatty acids considered as being produced by the user and free from inventory restrictions?

A.—No. Such fatty acids are not produced by the user, and, therefore, are subject to inventory limitations.

5. Q.—Are fatty acids held in rented storage outside the user's plant considered as part of his inventory?

A.—Yes, if he owns the fatty acids and they were not produced by him.

6. Q.—If a user has need for an inventory of fatty acids but had no base period usage to establish a quota, what should he do?

A.—A user is permitted an inventory of 3,000 pounds without a base period usage. If he needs more than a 3,000-pound inventory, he should apply to the Director of Food Distribution for relief.

7. Q.—If a user buys several grades of fatty acids, is he restricted in his inventory quota to those grades purchased in the base period?

A.—No.

8. Q.—Are delivery certificates necessary in the case of intra-company transfers of fatty acids?

A.—No. Delivery certificates are necessary only when ownership changes.

#### Private Formula Pricing

OPA Regulation No. 282 covers pricing of certain private-formula cosmetics, drugs and allied products. In explaining the revised pricing methods, OPA states as follows: "The regulation governing manufacturers' sales of 'private formula' drugs and cosmetics has been revised by the Office of Price Administration to provide pricing methods that are simpler and more uniform than those now in effect and

that will conform more closely to established practices of the industry.

"Private formula drugs and cosmetics are products made to the specification of the buyer, and this regulation governs only the initial sale by the producer to the first buyer. Present retail prices of packaged drugs and cosmetics will not be affected."

#### Ease Red Oil Allocations

**A**LLOCATION of industrial fats and oils by the War Food Administration are on the same basis for March as for February with the exception of four instances involving wool grease. Saponified red oil was removed from allocation as of Feb. 1 making it available without restrictions to all industrial users except manufacturers of liquid, industrial and household laundry soaps. Saponified red oil cannot be delivered to these users prior to the 16th of each month, and then only if the producer has made provision to fill all certified orders from other users. All users of red oil are being allocated 100 per cent of their requirements again in March.

The four exceptions involving wool grease and lanolin are as follows:

1. A limited quantity of lanolin will be allocated by the War Food Administration in March to refiners and distributors for redistribution among cosmetic manufacturers, including toiletries, shaving creams and soaps. Cosmetic manufacturers have not been supplied fresh stocks of lanolin since September, 1943.

2. Printing and mimeograph inks have been rated in class 3 on the wool grease allocation list (see schedule below), making available to users 100 per cent of their degreas requirements for March. Printing ink users also will get 100 per cent of their neutral or lanolin requirements.

3. Class 4 users of wool grease will be allocated 100 per cent of their degreas requirements instead of the 50 per cent allowed in February.

4. Class 5 users of neutral wool grease and lanolin will be allocated these grades only for purposes for which degreas will not suffice.

As in February, class 1 users of degreas and neutral wool grease will get 100 per cent of their requirements.

Class 2 users will receive 100 per cent of degreas requirements. There are no class 2 users of neutral wool fats. Rust preventive manufacturers (class 3) will get neutral wool grease to fill March orders on their books as of filing date for March delivery, and 100 per cent of degreas requirements for orders on their books as well as anticipated March orders.

#### Ban Cellophane Soap Wrap

Stocks of cellophane on hand in the factories of manufacturers of soaps, paradichlorbenzene blocks, cosmetics, cleaning materials and others which have been permitted for use where not suitable for other purposes, can no longer be used according to W.P.B. Limitation Order L-20 as amended Feb. 4. Altogether 26 classifications of products are included in the amended order.

#### Soap Container Priorities

Two new container priority orders were issued by the WPB, February 29. P-146 assigns an AA-3 priority to soap makers on fibreboard shipping containers. P-140, which has recently been amended to apply only to wooden shipping containers, now assigns an AA-3 rating to orders from soap makers.

#### Castor Suspension Continues

Continuation of the suspension of allocation of castor oil until July 1, 1944, thus extending the current suspension through the second quarter, was announced Feb. 19, by the War Food Administration, Washington. The extension is effected by an amendment to Food Distribution Order No. 32. There are no changes in present reporting requirements. Allocation of castor oil has been suspended since last Oct. 1.

#### Sperm Oil Ban Eased

By amendment to the sperm oil order, FDO No. 37, the War Food Administration on Feb. 19, freed it for essential uses and eliminated restrictions on its processing and delivery. In addition to freeing the oil for the eight specific essential uses, the announcement of the amended order states that  
(Turn to Page 43)



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**Packers Tar Soap Elects**

George S. Olds has just been elected president of Packers Tar Soap, Inc., Mystic, Conn., succeeding Edward Allen Olds, Jr., who becomes chairman of the board. Edward A. Olds, 3rd, has been elected executive vice-president and continues as secretary of the company. George S. Olds, the new president, continues to hold the post of treasurer, with David K. Olds as assistant treasurer.

**C-P-P Ltd. Chm'n Guest in N. Y.**

Robert B. Foster, chairman of Colgate-Palmolive-Peet, Ltd., of London, was guest of honor at a luncheon at the Racquet & Tennis Club, New York, last month, where he addressed a group of American and British business men. Mr. Foster, who is currently on a visit in the United States from England, told his audience that the great cooperation which exists today between the United States and England "must and will continue after the peace is won."

**Lessin L. A. Soap Co. Ad Head**

Irving Lessin, formerly head of the art department of Los Angeles Soap Co., Los Angeles, has been named advertising manager of the company to succeed Jerry Coleman, former advertising manager, who resigned recently to join Davis & Beaven, Los Angeles advertising agency.

**Chi. Soap Assn. Appoints Committ**

Joseph A. Gauer, manager of the Chicago office of Fritzsche Bros., Inc., and newly elected president of the Chicago Perfumery, Soap & Extract Association, has announced the following appointments to committee chairmanships:

Welfare—Irwin E. Smith, Victor Chemical Works; legislative—Harry Dunning, Albert Verley, Inc.; publicity—G. F. Claypool, The House

for Men, Inc.; luncheon—Stanley M. Lind, Harry Holland & Son, Inc.; bowling, John A. A. Scott, Merck &



JOSEPH A. GAUER

Co.; entertainment — Chris Christensen, Chas. Pfizer & Co., and Robert Holland, Harry Holland & Son, Inc.; golf — Martin Vance, Givaudan-Delawanna, Inc.; finance — Walter Ney, Mallinckrodt Chemical Works; membership — G. F. Pauley, Monsanto Chemical Co. Membership now includes 350 manufacturers, Mr. Gauer stated, and a drive to increase this will be conducted during the year.

**Loan Lever Traffic Mgr. To WFA**

Eldon Richardson, general traffic manager for Lever Bros., Cambridge, Mass., has been loaned to the government as special assistant to Lt. Ralph M. Olmstead, deputy director, Office of Distribution, War Food Administration. Mr. Richardson, who has been with Lever Bros. since 1920, is widely known as a traffic authority.

**ADMA To Meet May 1-4**

The American Drug Manufacturers Association will return this year to the Homestead, Hot Springs, Va., for their annual meeting. The session will be held the first week in May, opening May 1.

**Wrisley Employees Assn.**

The employees of Allen B. Wrisley Co., Chicago, have recently organized the Wrisley Employees Association. Sam Woodruff has been elected president, Ed Kunze vice-president, Thelma Farison secretary and Ira Fash, treasurer. The company has set up a fund of \$25,000 to support the new association, and part of this sum will shortly be spent on a new clubhouse to house a cafeteria.

**Pepsodent Sales Changes**

Malcolm Hart, sales manager of Pepsodent Co., Chicago, has been appointed to the newly created position of director of sales. Phil Kalech, former central division manager for Colgate-Palmolive-Peet Co., is the new sales manager. Mr. Hart, who was with Collier's for many years and later with Lord & Thomas, joined Pepsodent eight years ago as assistant sales manager. Mr. Kalech started out as a retail salesman with Colgate-Palmolive-Peet 24 years ago.

Paul Mundie, Pepsodent's Pacific Coast district manager for ten years, has been named Western sales manager. Western sales offices are being opened in the Title Guaranty Bldg., Los Angeles, and a complete sales force for that division is being organized.

**Peniston Succeeds Grossman**

Denman Peniston, who has been associated with the sale of alkalies for 33 years, has been appointed manager of the New York sales office of Solvay Sales Corp., it was announced late last month. He succeeds Charles P. Grossman who died Jan. 15. Mr. Peniston began his business career in 1910 with Wing & Evans, and when that company was purchased in 1916 by Solvay he was assigned to the sales department of Solvay, and has remained with the company since.



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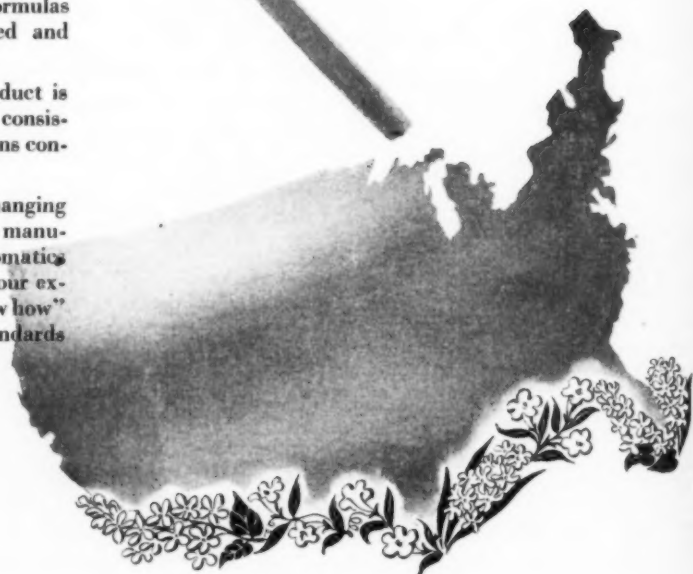
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## 1944 Soap Fat Allocations To Exceed Million Tons

ESTIMATES indicate that the 1944 supply of both edible and inedible fats and oils available for allocation will be slightly more than twelve billion pounds, according to the U. S. Department of Agriculture. About 68 per cent of that total or 8.3 billion pounds will be used for food purposes and 32 per cent for non-food uses or 3.9 billion pounds. Of the non-food fats and oils, 54 per cent will go into soap manufacture and about 87 per cent of the total soap made will be for civilian use. Estimated allocation of fats and oils for non-food uses in 1944 are given as follows: soap, 2,106,600,000 pounds; paint and varnish, 575,600,000 pounds; printing ink, 25,700,000 pounds; lubricating oils, 282,700,000 pounds; textiles and leather, 179,300,000 pounds; rubber, 159,100,000 pounds, core oils, 86,800,000 pounds; all other industrial uses about 500,000,000 pounds.

During 1944, if conditions are favorable, says the Department of Agriculture, it is expected that more lard, soybeans and peanuts will be produced in the United States than ever before. The supply of some fats and oils and oil bearing materials is likely to be less than the demand. The use of fats and oils in household soaps is still limited on 90 per cent of 1940-41 use; in paints and varnishes to 70 per cent. Interchangeability of oils is being used to fill in short stocks of some oils or fats, such as the wider use of linseed oil, commonly used wholly for industrial purposes, for the manufacture of edible products for export to our Allies.

Lard production in 1943 probably reached an all-time high, the output for the last quarter of that year making a new peak of over 900,000,000 pounds including non-inspected output. Its availability for soap manufacture during the last quarter of 1943 released a large tonnage of other types of fats needed for special purposes, particularly tallow for the manufacture of syn-

thetic rubber. To conserve the lard supply, the inspected grades were removed for a time from soap production, but late in February restrictions on their use in the soap kettle, were again relaxed.

Some oils, castor, oiticica, linseed, sperm and animal oils, have been removed temporarily from control by allocation, says the Department report further, and control over some others has been modified. For more than two years past, all imported oils and fats were purchased by the War Food Administration, but recently, purchasing of several of them has been returned to private industry for direct handling.

### Wrisley Co. Honors 25-Year Men

Employees of the Allen B. Wrisley Co., Chicago, who have been 25 or more years in the company's service, were honor guests at a turkey dinner in the Stevens Hotel, Jan. 9. Adolph Thal, general superintendent, was master of ceremonies and talks were made by Pres. Wrisley B. Oleson and George Wrisley, first vice-president. Boutonniers were presented to the 25-year men and orchids to the women with long service records. After the dinner the 168 employees and guests at the dinner attended Sonja Henie's Ice Revue at the Chicago stadium.

### Attack C-P-P Advertising Claims

The Federal Trade Commission in a complaint issued last month attacked advertising claims made by Colgate-Palmolive-Peet Co. for "Palmolive" soap, shaving cream and brushless shave, "Colgate" tooth powder and dental cream, and "Super Suds."

In "Palmolive" advertising, the complaint charges, the company has represented palm and olive oils as the only fats used. The commission says "Palmolive" soaps contain none of the

usual edible olive oil, but are manufactured from various fats, including olive oil foots.

The commission objects to advertised comparisons of the "Colgate" dentifrices with "ordinary" preparations, saying they possess no inherent superiority and asserting that the sparkle of teeth depends on qualities of the enamel.

The lather shaving cream contains no olive oil and the brushless cream only an insignificant amount, the complaint says, and neither will produce a more youthful appearance.

### AOCS To Meet in New Orleans

Plans have been made to hold the 35th Annual Meeting of the American Oil Chemists' Society in New Orleans, May 10-12, 1944. The Roosevelt Hotel has again been selected as headquarters for the convention and all technical sessions, committee meetings and the annual dinner will be held there. The local committee headed by Dr. George W. Irving, Jr., of the Southern Regional Research Laboratory, New Orleans, is arranging a program of papers which will include chemical, analytical, technological, industrial and economic phases of fats and oils. Hotel reservations should be made as soon as possible through Roy R. Bartlett, convention manager of the Roosevelt Hotel.

### Walters OPA Administrator

Rae E. Walters, president and owner of the Harlan Rendering Co., Harlan, Ia., has been appointed administrator, in charge of the sixth region of the Office of Price Administration, with headquarters in Chicago. In 1942, Mr. Walters gave up active management of his business enterprises and volunteered for duty with the OPA to serve without pay for the duration. He has been a vice-president of the National Renderers Association, for the past three years. Serving first on the local Harlan rationing board, Mr. Walters became district director at Des Moines, Ia., on Jan. 7, 1943, from which post he was transferred to the Chicago regional OPA office early last month.

### Canada Soap Output Up in '42

Figures covering the soap, washing compounds and cleaning preparations industry in Canada for 1942, have just been released and reveal an increased dollar volume in 1942 of 22.4 per cent higher than that for 1941. The number of soap companies rose in 1942 to 125, as compared with 116 engaged in soap making in the previous year, according to the figures of the Department of Trade and Commerce of the Dominion Bureau of Statistics. In 1942, production from 125 factories was valued at \$31,484,125 as against \$25,713,565 worth produced by 116 factories in 1941. The number of employees also rose: 3,268 in 1942 as against 3,080 in 1941. This increase was reflected in an increase in the wages paid, which totaled \$5,490,076 in 1942. In 1941 workers received \$4,599,815 in wages. Capital employed amounted to \$23,964,341 as against \$19,655,042 in the previous year.

A breakdown of the number of

plants engaged in manufacturing the various types of cleaning agents shows that: 43 were engaged primarily in the manufacture of soap; 45 made washing compounds, such as javelle water and sodium hypochlorite as their main products, and 38 were principally devoted to producing such cleaning preparations as cleansing powders, hand cleanser and drain pipe cleaner.

In terms of output tonnage and its dollar value, the following statistics were released: 17,359 tons of toilet soap valued at \$6,394,441; 35,939 tons of bar laundry and household soaps, at \$5,083,960; 22,814 tons of soap chips and flakes, at \$4,327,582; 25,662 tons of soap powders, \$6,374,004; 2,881 tons of textile and mill soaps, \$585,651; 1,267 tons of castile soap, \$259,678; 767 tons of shaving soaps and creams, \$1,524,642; 2,101 tons of liquid soaps, \$670,346; 1,316 tons of soft water soaps at \$266,851; 8,230 tons of cleaning and scouring powders, etc., \$1,184,392; javelle water and sodium hypochlorite valued at \$1,007,091.

### Issue Swift Annual Report

More than 17,500 employees of Swift & Co., are now in the armed services, John Holmes, Swift president, stated in his annual "Report to Employees" on 1943 activities, which was distributed early last month. Wages paid during 1943 increased 10.6 per cent over 1942 and 37 per cent over the average paid for the past five years, Mr. Holmes said.

### Bonuses To Employee Recruiters

More than a hundred employees of the Allen B. Wrisley Co., Chicago, have "cashed in" on the company's plan to pay them a commission for recruiting new employees. If the newly hired worker remains 30 days at full time, the employee responsible for getting him on the payroll, receives \$2. After 90 days of employment another \$2 is paid and after six months the "recruiting officer" gets \$6 more. For securing part-time employees this sliding "commission" totals \$5 after six months of service by the new worker. Mothers of boys in the service are numerous among new employees and many high school students work part-

time. Several blind persons are also employed in the Chicago plant and are reported to be giving excellent service.

### Lever Has Political Advisor

Lever Bros. and Unilever, Ltd., Great Britain, are reported to have appointed Professor David Mitrany as the company's adviser on social and political questions both national and international. An announcement by the board of directors states that the company has always been of the opinion that the most desirable policy for a business organization is one which sets considerable store in improving conditions in the community in which it operates, and that now, more than ever before, questions of this nature deserve intensive study.

### Named Fritzsche Chi. Office Mgr.

Stanley B. Schuster has just been named office manager of the Chicago branch of Fritzsche Bros., Inc., perfuming materials. The Fritzsche Chicago branch is under the management of Joseph A. Gauer, who is currently serving as president of the Chicago Perfumery, Soap and Extract Association.

### Lever, P & G Settle Amicably

Lever Brothers Co., Cambridge, have just announced that the litigation between Lever Bros. and Procter & Gamble Co., Cincinnati, has been amicably settled between the two companies. A settlement of the patent case has been effected and Procter & Gamble Co. will continue to make "New Ivory" as at present. All of the pending legal action by both parties has been dismissed.

The announcement follows a ruling by the U. S. Fourth Circuit Court of Appeals, which met in Richmond, Va., Dec. 28, that Procter & Gamble had infringed on the Bodman soap making patent, held by Lever Bros. for its "Swan" soap. Previously, the District Court at Baltimore decided that the introduction of the "New Ivory" by P&G did not constitute an infringement of the Bodman patent and ruled that the Bodman patent was invalid. The Fourth Circuit Court reversed the District Court's ruling. In making the announcement that the matter had been settled amicably the possibility that the U. S. Supreme Court would finally decide the case was eliminated.

### New Quarters for Prim Corp.

Prim Corp., St. Louis manufacturer of household cleaning compounds, has purchased a one-story factory containing 16,000 sq. ft. of floor space at 2525 Cass Avenue, St. Louis, and plans to move there from former quarters at 2215 Lucas Street.

### New Metal Cleaner

Nielco Laboratories, Detroit, has recently developed a new alkali cleaner for brass cartridge casings which is to be called "Nielco Lab. No. 1919." It is described as a free flowing powder, readily soluble in warm water, safe to use and harmless to skin and clothing. It is claimed that it will outlast the majority of alkali cleaners in length of retention of high pH content. It is said to have application in the cleaning of tin and stainless steel, as well as for cleaning of brass cartridge casings, for which specific use it was developed.

*Traditions of Niagara*

# Pillars of Strength



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**An Essential Part  
Of America's  
Great Chemical  
Enterprise**

Temple of worship for the Indian... a doorway to opportunity for the white man... Niagara is today fulfilling its ancient promise as a symbol of America's might. Its towering columns of water are pillars of strength for a vast industrial territory... sustaining hundreds of plants and factories with the tremendous hydro-electrical energy needed to meet the demands of war production.

As one of the pioneer chemical companies in this area, Niagara Alkali Company is playing an important role in the

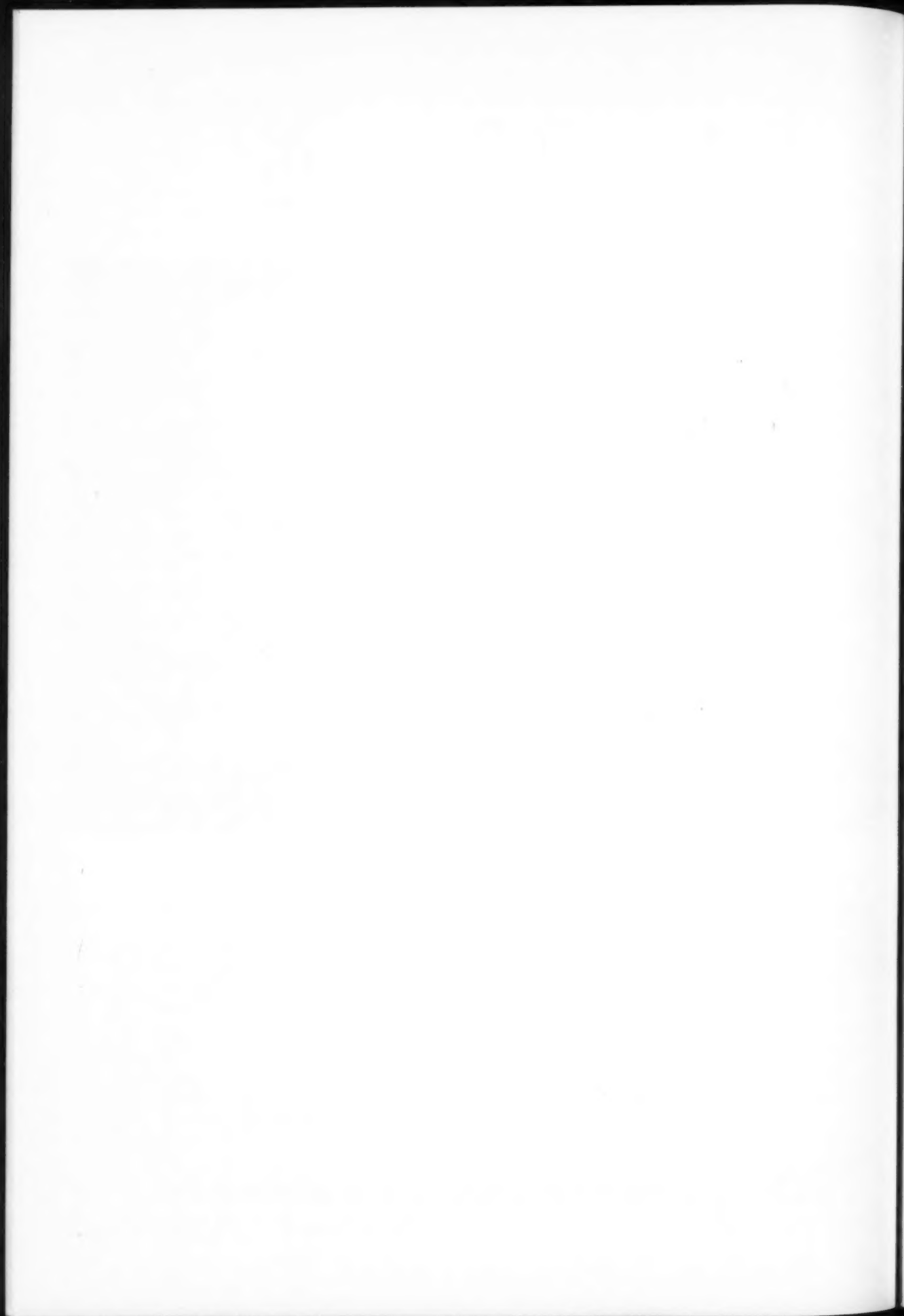
drama of war industry. Armed with valuable experience gained in producing several important chemicals for the first time in this country, Niagara Alkali is speeding up production of highly essential chemicals and cooperating with many industries in using them more efficiently and economically. Thus, out of its wartime experience, the company is finding new ways to give its customers better peacetime service.

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CARBONATE OF POTASH • LIQUID CHLORINE**



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#### Appoint TGA Convention Committ

The personnel of the convention committee for the annual meeting of the Toilet Goods Association has just been named by L. R. Root, chairman. The association's 1944 meeting will be held at the Waldorf-Astoria Hotel, New York, May 18 and 19. Members of the committee are: A. C. Burgund of the Carr-Lowrey Glass Co.; Charles Fischbeck, P. R. Dreyer Inc.; P. E. Haebler, Goldschmidt Chemical Corporation; W. E. Klaas, Brass Goods Manufacturing Co.; M. Lemmermeyer, Aromatic Products, Inc.; M. F. Martin, U. S. Industrial Chemicals, Inc.; W. P. Murray, Continental Can Co.; Karl Voss, Karl Voss Corporation; J. Blaine Walker, Hazel Atlas Glass Co.

#### Wrisley Retirement Plan

Directors of the Allen B. Wrisley Co., Chicago, have expanded their employee profit sharing and retirement plan to include all employees under the age of 65 years who have been with the company for three years after Dec. 24, 1943. Full credit is given employees in the armed services for time in service. No contribution is required from the employee, the plan being supported entirely by the company. For employees three to ten years in the organization, this contribution equals 13 per cent of the individual's earnings. For each five years of service above 10 years, the sum is increased 1 per cent up to 17 per cent for employees serving 25 years or more.

#### C-P-P Accountant Dies

Nathaniel W. Simpson, an accountant for 16 years with the Colgate-Palmolive-Peet Company of Jersey City, died at his home in Milburn, N. J., last month. He was 54 years old. Mr. Simpson was a member of La Grange Lodge of Masons. He leaves a widow, a sister, Mrs. Harry Simpson, and a brother, T. J. C. Simpson.

#### CD&CA Hears of Commandos

The Chicago Drug and Chemical Association heard Bruce Thomas tell of his eye-witness accounts of raids across the English Channel to France,

the North Sea to Norway and of living with the "Soldiers of Darkness" in their primitive Scottish Highland training camp at their Feb. 24th luncheon meeting, in the Walton Room of the Drake Hotel, Chicago. Mr. Thomas' address, entitled "The Commandos Strike," included his explanation of why Rudolph Hess flew to England and stories of convoy trips on the Atlantic Patrol.

#### Introduce New Diaper Wash

Diaperwite Co., New York, has recently put on the market a new diaper wash to be sold under the name "Diaperwite." The product is packed in one-pound cartons, to retail at 25 cents. Allen Sales Co., New York, has been appointed exclusive sales agent.

#### Standard Synthetics Has Fire

Damage due principally to water flooding the company's newly furnished offices and parts of the warehouse was caused by a fire on the premises of Standard Synthetics, 30 W.

26th Street, New York, essential oils firm, on Feb. 11. Although no estimate of the damage was immediately available, the announcement said that the damage can be repaired and the loss of essential oils was not very great. Work was interrupted for two days.

#### Columbia Raises Means

Dwight R. Means, who has been associated with the Columbia Chemical division of Pittsburgh Plate Glass Co., Pittsburgh, for 21 years, was recently appointed assistant to the vice-president. After attending the University of Kansas, Mr. Means joined the company as a draftsman. Prior to his recent appointment, he was technical director and had previously served as research director and assistant superintendent.

#### Shulton Man Inducted

Frank N. Carpenter, Jr., of the New York general sales department of Shulton, Inc., toiletries house, was inducted by the U. S. Army, Feb. 11.



## Soap Sales Decline in 1943

SOAP sales and deliveries by American manufacturers receded moderately during 1943, from the record totals set in the previous two years, according to figures released last month by the Association of American Soap and Glycerine Producers and based on its quarterly census of soap sales. These figures are based on the reports of 71 leading manufacturers who make perhaps 75 to 80 per cent of the total soap output of the country. Year-end figures from this sales census show total sales of soaps, other than liquid, to have been 2,826,638,568 lbs. for 1943. This amount is well ahead of any year prior to 1941, but is well below the record figure of 3,138,260,597 lbs. recorded for 1941 and the total of 2,929,582,158 lbs. reached in 1942. All the above totals include sales to the Army, Navy and other government agencies, as well as sales to civilians.

The dollar value of 1943 soap sales showed an advance in spite of the moderate drop in tonnage. The value of 1943 deliveries was \$370,285,340, an increase of 2½ per cent over the 1942 figure which was \$361,360,341.

During 1943, soap sales reached their peak in the final quarter of the year, a rather unusual contrast with the normal record for previous years. Fourth quarter sales amounted to 757,871,893 lbs. valued at \$101,607,231 during the year just ended.

Sales of liquid soaps in 1943, as reported by 40 manufacturers, totaled some 3,250,428 gallons, valued at \$3,342,312. This compared with reported sales of 2,476,785 gallons, worth \$2,661,916, in 1942. Figures for both years are admittedly incomplete, and report production of only a small section, numerically, of the potash soap industry.

It's all YOURS...  
and it's *Free!*



#### PARTIAL LIST OF CONTENTS

##### PART I

This section contains discussions of the following materials, including their botany, origin, chemical and physical characteristics and applications: Essential Oils, Terpeneless and Sesquiterpeneless Oils, Floral Waters, Natural Flower Oils, Floral Absolutes and Concretes, Animal Fixatives, Resinoids, Tinctures and Aromatic Chemicals.

##### PART II

This section describes and gives suggestions for use of the following: Synthetic Flower Oils and Specialties, Absolute Composites, Compounded Aromatic Bases, including Perfumes for Alcoholic Extracts, Colognes and Toilet Waters, Creams and Lotions, Powders, Perfumes Soluble in Low Proof Alcoholic Preparations, Water Soluble Perfumes, Perfumes for Miscellaneous Cosmetic Preparations, Bath Salts, Hair Preparations, Liquid and Solid Incense, Prefixation Agents and Fixatives, Perfumes for Soaps and Technical Specialties.

##### PART III

This section is devoted to useful tables and practical time-saving computations.

**T**HIS handsome new book is for perfume chemists who influence or control the selection and purchases of essential oils, aromatic chemicals, perfume compounds and synthetics used in the production of soaps, perfumes, cosmetics, toilet preparations, sprays, insecticides, janitor's supplies or other technical products. Its 268 pages are replete with information relating to these products — information which cannot be found in any other single volume. Users will find that this is not the usual type of catalog, but rather a guide and handbook of truly useful content, technically accurate and fully indexed to provide a ready and convenient source of authentic and much needed information.

A glance at the adjoining partial list of contents will give just a suggestion of the scope of this most valuable book. In the hands of those responsible for the selection of perfume raw materials and for the quality and salability of their company's products, it should prove of inestimable help. We suggest, therefore, that if you are in the category mentioned above and as yet have not received one of these books, you write us on your company letterhead mentioning this ad and requesting a copy of our **PERFUMERS' HANDBOOK AND CATALOG**. There will be no charge, but obviously we must reserve the right to limit distribution to those we feel qualified to receive this book and to firms located within the boundaries of the United States and Canada.

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FACTORIES AT CLIFTON, N. J. AND SEILLANS (VARI) FRANCE



### P & G Gives Bonuses

Some 386 employees of the Procter & Gamble Co.'s Chicago plant gathered at Lane Technical High School auditorium, that city, Feb. 19 to receive their dividend checks from the \$52,645 distributed under the P & G 56-year old profit sharing plan. Speakers at the celebration included R. K. Brodie, vice president, and L. E. Strub, Chicago plant superintendent. A. E. Walgren headed the committee on arrangements for the affair. The profit sharing plan is based on stock ownership and in addition to the regular disbursements, employees receive an extra dividend of from 5 to 15 per cent, depending on length of service.

### Oil Trades Assn. Meets

The Waldorf-Astoria Hotel, New York, was the scene of the annual meeting of the Oil Trades Association of New York, March 7. Nominated for office were: president, W. M. Osborn, Zimmerman, Alderson, Carr Co.; vice-president, K. L. Patterson, Stanco Distributors, Inc.; secretary, Joseph C. Smith, Smith Weihman Co., and treasurer, Rudolph G. Sonneborn, L. Sonneborn Sons, Inc.

### Committee D-12 Meets Mar. 13

Committee D-12 on soaps and other detergents of the American Society for Testing Materials, will hold its spring meeting at the Hotel New Yorker, New York, March 13-14, according to announcement issued late last month by Harry P. Trevithick, of the New York Produce Exchange, who is chairman. The schedule of committee meetings for Monday, March 13, includes a session from 9:30 a.m. to 1:00 p.m. of Joint subcommittees II and I, sections E and A on sulphonated detergent specifications and soap methods. Joint subcommittees II, sections A and C meet from 2:00 to 5:00 p.m. on textile and straight soap specifications. From 3:00 to 4:00 p.m. joint subcommittees I and II sections C and D discuss dry cleaning soaps, while from 4:00 to 5:00 p.m. there is a meeting of the advisory committee.

Tuesday morning, March 14, subcommittee II, section B takes up the

subject of built soap specifications from 9:00 to 11:00 a.m.; at the same time section G of subcommittee II discusses metal cleaners. From 11:00 a.m. to 1:00 p.m. subcommittee III considers definitions. Special detergent specifications occupy subcommittee II, section F from 11:00 a.m. to 12:00 noon. Subcommittee I, section D studies special detergent methods from 12:00 noon to 1:00 p.m. At 1:00 p.m. there is to be a luncheon followed at 2:00 p.m. by subcommittee meetings, a general meeting and election of officers.

### Form Amend Drug & Chem. Co.

A new chemical and drug firm, headed by E. Paul Amend and five officials of Eimer & Amend, New York drug, chemical and apparatus supply firm, has been organized to operate under the name of Amend Drug & Chemical Co., it was learned in New York, late last month. The firm will deal in and manufacture fine chemicals and specialties, but not in laboratory or other scientific apparatus. In addition to occupying three floors at 117-119 E. 24th St., New York, where manufacturing will be done and special formulae and mixtures will be prepared in a main floor laboratory, there will be other manufacturing at a plant in Lodi, N. J.

The official make-up of the new company includes the following men, who were with Eimer & Amend for periods ranging from 13 to 60 years: president, E. Paul Amend, formerly assistant secretary of Eimer & Amend; vice-president, Edward B. Amend, who held a similar position in his former company; secretary and treasurer William J. Grill; vice-presidents: G. Robert Bolin and William C. Schroeder. Amend Drug & Chemical Co. will handle such products as: reagent chemicals, bacteriological media, botanicals, elixirs, essences, extracts, gums, oils, pharmaceuticals, solutions, solvents, stains, tinctures, and waxes. The new firm will act as sales agents for Merck & Co., Rahway, N. J. and Mallinckrodt Chemical Works, St. Louis, fine chemical manufacturers.

### Sterling Soap Head Dies

Louis Rothstein, 52, president and general manager of Sterling Soap and Chemical Co., of Wilmington, Del., died Feb. 17 after suffering a heart attack in Temple University Hospital, Philadelphia, where he had been a patient about four weeks. A native and lifelong resident of Wilmington, Mr. Rothstein was graduated from Wilmington public schools and Goldey College. He was a member of the Wilmington Chamber of Commerce; Lafayette Lodge No. 14, A. F. and A. M., the Fraternal Order of Eagles, the Y.M.H.A., and several other organizations.

Surviving are his wife, Mrs. Mabel Wolters Rothstein; four brothers, Michael of Los Angeles, Calif., Maurice of Philadelphia, Edward and Albert Rothstein of Wilmington, and one sister, Mrs. Anna Goorland of Wilmington.

### Shulton Sales Appointments

Shulton, Inc., New York, has named Lewis S. Cobb as sales representative in the New York district. Lawrence G. Metcalf will represent Shulton in upper New York State. Leslie Nicholson has been assigned to the territory in Arizona, Nevada and part of California, and Hugh Osborne will cover Montana, Utah, Idaho, Washington and Oregon.

### Packaging Show Mar. 28-31

A wide range of packaging topics are scheduled for discussion at the packaging conference and exposition of the American Management Association to be held in Chicago's Palmer House, March 28 (Thursday) through the 31st. Answered at the annual meeting will be such questions as: what changes may be expected in packaging as a result of war-time shipping experiences?; what are the prospects for critical materials and new materials coming up from the laboratories?; and what about new packaging machinery, production methods, channels of distribution and new fabricated materials in the post-war period?

At the conference will be a packaging exposition—said to be the largest ever held. Latest war and essen-



## ***Synthetic floral oils . . .***

**P**RESENT reduced supplies of natural floral essences emphasize the value of high quality substitutes. Synthetic floral essences can be used to replace the natural oils with full satisfaction and marked success in numerous products,—toilet soaps, shampoos, shaving creams, powders, creams, and many others.

In fact, in many products the newer synthetic floral essences are to be *preferred* for the manner in which they reproduce the true fragrance of the living flowers in the finished product,—not to mention uniformity of quality and odor fidelity, and their economy under present conditions.

Let us tell you more about these Norda substitutes as an answer to the scarcity of natural floral oils.

## **NORDA Essential Oil and Chemical Co., Inc.**

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2800 E. 11th Street

*St. Paul Office*  
253 E. 4th St.

*Toronto Office*  
119 Adelaide St., W.

*New York Office*  
601 West 26th St.

*Montreal Office*  
135 Commissioners St., W.

tial civilian packaging will be shown, as well as details of new developments in equipment, machinery, materials and supplies that will be available after the war.

#### Chas. Homan's Daughter Marries

The marriage on February 27, of their daughter Margaret to Ensign Warren G. Kreter, U.S.N.R., was announced March 2, by Mr. and Mrs. Charles O. Homan, of Rockville Centre, N. Y. Mr. Homan is sales manager of Dodge & Olcott Co., New York essential oil house. Ensign Kreter, a Dartmouth graduate, is the son of Mr. and Mrs. Charles F. Kreter, Rockville Centre, N. Y. The wedding ceremony was performed by the Rev. John Fischer, and took place in the rectory of St. Anthony's Church, Oceanside, L. I., at 4 p.m., Sunday, Feb. 27. Following the ceremony, was a reception at the Garden City Hotel. Mrs. Kreter is a graduate of La Salle Junior College and Katherine Gibbs School.

#### Chemist Club Nominees

Officers recently nominated by the nominating committee of the Chemists' Club, New York, include: president, C. R. Downs, New York; resident vice-president, Chester L. Knowles, Dorr Co., New York; non-resident vice-president, L. W. Bass, New England Industrial Research Foundation, Inc., Boston; suburban vice-president, A. J. Weith, Bakelite Corp., Bloomfield, N. J.; secretary, A. G. Syska, Syska & Hennessy, New York; treasurer, Ira Vandewater, R. W. Greeff Co., New York; trustees, three year term, Carl Haner, American Cyanamid & Chemical Corp., New York; J. G. Park, Stanco Distributors, Inc., New York, and trustee, one year term, Frank S. Low, Westvaco Chlorine Products Co., New York. John A. Chew of John A. Chew, Inc., New York, served as chairman of the nominating committee.

#### Roy Newport Chicago Mgr.

R. C. Roy has been appointed manager of the Chicago office of Newport Industries, Inc., naval stores. He succeeds P. E. Calo, who has just resigned.

## WASHINGTON OUTLOOK

(From Page 33)

manufacturers desiring to use the oil for purposes not specifically mentioned should apply for authorization to the Director of Food Distribution, War Food Administration, Washington 25, D. C. Applications for such authorization should be filed on form FDA-478 by the 15th of the month preceding the month in which the oil is to be used.

#### Peroxides Allocated

Hydrogen peroxide, sodium peroxide and sodium perborate were placed under allocation February 28 by the WPB. These three chemicals have been controlled by directive since December 1, 1943, but are now brought under General Order M-300. It is anticipated that this new control may result in allocation of smaller quantities for textile finishing.

#### Canada Drops Glycerine Curbs

All restrictions on civilian use of glycerine in Canada were reported dropped last month. The order is reported to free glycerine for anti-freeze use as well as other civilian uses for which it was formerly forbidden.

#### Phosphates Allocated Bimonthly

Allocation of all sodium phosphates was placed on a bimonthly basis by Amended W.P.B. Order M-334, effective Feb. 7. The order calls for adjustments in delivery and use restrictions and covers trisodium phosphate, tetra sodium pyrophosphate, sodium hexametaphosphate, and others.

#### Allocate Methyl Bromide

Methyl bromide, commonly used as an insecticide, was placed under allocation control effective March 1, the WPB announced recently. The maximum monthly exemption is ten pounds. No other deliveries may be made without specific authorization.

#### Fish Oil To Be Released

Release of quantities of fish oil from government reserves on March 10, with additional quantities released

monthly through June, 1944, was announced Feb. 17, by the War Food Administration. The only oils in the reserves are Alaska herring, menhaden, pilchard and sardine oils which will only be released for use in water insoluble metallic soaps, and certain other specified products, the WFA announcement stated.

#### Report on '43 Alkali Output

In 1943, according to an estimate made by Chemical & Metallurgical Engineering for Feb., 1944, based on U. S. Census Bureau figures for the first 11 months of the year, 4,562,000 tons of soda ash were produced. A breakdown shows that of this figure, 4,380,000 tons were ammonia soda, 164,000 were natural soda and 18,000 tons were electrolytic soda. This increase of nearly 16 per cent above 1942 production, compares with similar figures of 3,788,583 tons of ammonia soda, 136,172 tons of natural soda and 18,000 tons of electrolytic soda in 1942. In 1941 3,606,826 tons of ammonia soda, 100,734 tons of natural soda and 18,000 tons of electrolytic soda were produced. Caustic soda, however, while 12 per cent more was produced in 1943 than in 1942 was below the 1941 record level.

Soap makers, among all the principal users of soda ash, were the only group not increasing their 1943 requirements as compared with earlier years. Although the percentage increase in use of caustic soda was greater than that for soda ash, the percentage of production change was considerably less, owing to the cushion of stocks from the preceding year. Soap makers used 105,000 short tons of caustic soda in 1943, as compared with 120,000 short tons in 1942 and 125,000 tons in 1941, and 150,000 short tons of soda ash in 1943 as compared with 165,000 tons in 1942 and 170,000 tons in 1941.

#### Wrisley Triples Glycerine Output

Production of glycerine by Allen B. Wrisley Co. reached three million pounds in 1943, according to the latest issue of *Suds*, Wrisley house magazine. This was three times the output in the pre-war year, 1938.





**Even under fire  
our soldiers**

**get their daily quart of milk!**

Wherever our fighting men go, their K ration kits supply them with their daily milk supply . . . in the form of cheese packed in 4 ounce cans!

It takes 10 pounds of milk (5 quarts) to make one pound of American Cheddar Cheese . . . so each of these 4 ounce cans contains the essential food values of a quart plus an additional glass of milk.

The Plymouth, Wisconsin, Plant of the Lakeshore-Marty Co., Division of The Borden Company,

packs millions of pounds of Pasteurized Processed Cheese in sturdy, easy-to-open cans supplied by Crown. In all parts of the world, our fighting forces are getting their "quart of milk each day" . . . in the form of cheese . . . thanks to these Crown Cans that protect the contents from the Wisconsin plant all the way to the front!

One more reason why the men and women of Crown take extra pride in their job of making the containers that serve our fighting men!

CROWN CAN COMPANY, New York • Philadelphia  
Division of Crown Cork and Seal Company, Baltimore, Md.

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**CROWN CAN**



# BIDS AND AWARDS

## P. O. Soap Bids and Awards

In a recent opening for miscellaneous supplies by the Treasury Department Procurement Division, the following bids and awards were published for laundry soap, soap powder, grit soap and scouring powder: Item 51-S-1655, 60,000 pounds of laundry soap—Unity Sanitary Supply Co., New York, 15,000 pounds only, 9.5c; Colgate-Palmolive-Peet Co., Jersey City, N. J., 30,000 pounds 5.63c, accepted; Procter & Gamble Co., Cincinnati, 30,000 pounds, 5.941c, accepted; Item 51-S-1750, 10,000 pounds of soap powder—Unity Sanitary Supply Co., New York, 5.5c; Procter & Gamble Distributing Co., Baltimore, 3.332c, accepted; Item 51-S-1530, 25,000 pounds of grit soap—Day & Frick, 4.6c per pound, accepted; Unity Sanitary Supply Co., New York, 6.5; Item 51-P-2600, 24,000 pounds of scouring compound—American Soap & Washoline Co., Cohoes, N. Y., \$2.40 a hundred pounds, accepted; Armour & Co., Chicago, 2.80c per pound; Unity Sanitary Supply Co., New York, 5.5c and Imperial Products Co., Philadelphia, 2.54c.

## N. Y. Navy Wax, Dispenser Bids

In recent openings by the New York Navy Purchasing Office, New York, for miscellaneous supplies the following bids were received on 1,300 gallons of floor wax: R. M. Hollingshead Corp., Camden, N. J., 73.3c; Penetone Corp., Tenafly, N. J., 78c, three cans to the case or 72c in 55-gallon drums, including 24 drums at \$1.10 each; Oil Specialties & Refining Co., Brooklyn, 78c; Twin City Shellac Co., Brooklyn, 80c, one can to a carton; Buckingham Wax Co., Long Island City, N. Y., 85c, one can to the corrugated carton; Fuld Bros., New York, 85.6c; Uncle Sam Chemical Co., New York, 96.8; Industrial Distributors, New York, 98c; United Sanitary Chemical Co., Baltimore, \$1, one can to a carton; Windsor Wax Co., Hoboken, N. J., \$1.04; Vestal Chemi-

cal Labs., St. Louis, Mo., \$1.23; A. C. Horn Co., Long Island City, N. Y., \$1.292, two to a wooden case, or \$1.24 in 5-gallon, 24 gauge pails with spout, or \$1.23, two in a carton; C. H. Tiebout & Sons, Brooklyn, \$1.30. In another New York Navy opening for 100 soap dispensers, the following bids were received: Reliable Metal Novelty Co., New York, \$2, black, with crank or button handle, or \$2.30, white, with crank handle, or \$2.50, white, with black button handle; Crane Co., Long Island City, N. Y., \$2.25; Smolka Co., New York, \$2.75; and Unity Sanitary Supply Co., New York, \$3.75.

## Du-Rite Liquid Soap Bid Low

Du-Rite Chemical Co., Brentwood, Md., submitted the low bid of 85c in a recent opening for miscellaneous supplies by the Post Office Department, Washington, D. C., for 15 gallons of liquid hand soap. The only other bid was \$1.25 a gallon, entered by West Disinfecting Co., Long Island City, N. Y.

## GPO Floor Cleaner Bids

Among the low bids entered in a recent opening for miscellaneous supplies by the Government Printing Office, Washington, D. C., on 110 gallons of cleaner for waxed rubber floors, etc., were those by: R. M. Hollingshead Corp., Camden, N. J., 79c a gallon; Penetone Corp., Teaneck, N. J., \$1.57; Industrial Distributors, New York, 86c; Uncle Sam Chemical Co., New York, 60c; and United Sanitary Chemical Co., Baltimore, 80c.

## Navy Dispenser Bids

In a recent opening by the Navy Dept. Bureau of Supplies & Accounts, Washington, D. C., for miscellaneous supplies, the following bids were entered on lot 1, 12 soap dispensers for Key West; lot 2, item 1, 1,250 for Seattle; lot 2, item 1a, 1,250 for Oakland, Calif.; lot 3, 750 for San Francisco; lot 4, 650 for Oakland; Palmer Products, Waukesha, Wisc.,

lot 1, \$1.55; lot 2, items 1 and 1a, \$1.45; West Disinfecting Co., Long Island City, N. Y., lots 1 and 2, all items \$1.60; lot 3, \$1.70; Moore Bros. Co., New York, lots 1, 2, and 3, \$1; Garnet Chemical Corp., Allentown, Pa., lots 1, 2, and 3, all items, \$1.50; Clifton Chemical Co., New York, lots 1, 2, and 3, all items, \$2.29; and Voorhis-Tiebout Co., Red Hook, N. Y., lot 4, \$2.25.

## Urinal Deodorant Cake Bids

The following bids were received in a recent opening for miscellaneous supplies by the New York Navy Purchasing Office, New York, on 7,000 cakes of deodorant for urinals: Clifton Chemical Co., New York, 7c; C. B. Dodge Co., Waterport, Conn., 42c per pound; Unity Sanitary Supply Co., New York, 10c; Cresco Co., Long Island City, N. Y., 14c and City Chemical Corp., New York, 16c.

## Rat Trap Bids

The following bids were received in a recent opening for miscellaneous supplies by the Philadelphia Navy Yard, Philadelphia, on 1,200 spring rat traps: McGill Metal Products, Marengo, Ill., 6.25c each; Murta Appleton, Philadelphia, total \$86.25; and Supplee Biddle Hardware, Philadelphia, 7c each.

## WFA Toilet Soap Purchase

The War Food Administration, Washington, D. C., in a recent opening for miscellaneous supplies made a special purchase of 81,250 pounds of toilet soap from Lever Brothers Co., Cambridge, Mass., at 16.432c per pound.

## Martin Labs. Buy New Plant

Martin Laboratories, Inc., New York, manufacturer of chemical products, has purchased the factory formerly used by American Cyanamid & Chemical Co., at Plum Lane Point and Ave. P, Newark, N. J., and after improvements will occupy the new quarters as its main plant. About 20 buildings on a four-acre site were included in the transaction.

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and improve the character  
of the perfume of your  
soap.**

**In a wide range of odors.**

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## NEW TRADE MARKS

The following trade - marks were published in the February issues of the *Official Gazette* of the United States Patent Office in compliance with Section 6 of the Act of September 20, 1905, as amended March 2, 1907. Notice of opposition must be filed within thirty days of publication. As provided by Section 14, fee of ten dollars must accompany each notice of opposition.

### Trade Mark Applications

**SYN-NAUBA**—This in upper case stencil letters for vegetable wax Carnauba substitute. Filed Nov. 6, 1943 by William B. Gallagher, Philadelphia. Claims use since July 23, 1943.

**METASIL**—This in upper case bold letters for cleansing agents. Filed Oct. 31, 1942 by Pittsburgh Plate Glass Co., Pittsburgh. Claims use since June 22, 1938.

**BAGET**—This in upper case bold letters for jewelry cleaner. Filed Oct. 12, 1943 by D. Blum & Co., New York. Claims use since Oct. 1940.

**EX-PEL-OL**—This in upper case medium letters for a floor cleaning compound. Filed Oct. 21, 1943 by Refiners Lubricating Co., New York. Claims use since Oct. 5, 1943.

**FOLLOW ME SUIVEZ MOI VARVA**—This in upper and lower case script and upper case medium letters for soap. Filed Nov. 18, 1943 by House of Tre-Jur, Inc., New York. Claims use since Jan. 2, 1943.

**SILVERFLEECE**—This in upper and lower case script letters for silverware cleaner. Filed Aug. 7, 1943 by Earl Products Co., Chappaqua, N. Y. Claims use since June 17, 1941.

**FORBIDDEN**—This in upper case letters for toilet soaps. Filed Nov. 16, 1943 by Les Parfums De Dana, Inc., New York. Claims use since Nov. 2, 1943.

**HALAGO**—This in upper case letters for toilet soaps. Filed Nov. 16, 1943 by Les Parfums De Dana, Inc., New York. Claims use since 1933.

**MERBAK**—This in upper case bold letters for germicide, antiseptic and disinfectant. Filed Sept. 16, 1943 by Schieffelin & Co., New York. Claims use since Aug. 2, 1943.

**ARMOR-KOTE**—This in upper case letters for hand coating cream. Filed by Cadet Creme Co., Worcester, Mass. Filed Oct. 15, 1943. Claims use since July 14, 1943.

**DRENE**—This in all lower case bold letters for shampoo. Filed Nov. 30, 1943 by Procter & Gamble Co., Cincinnati. Claims use since Oct. 25, 1933.

**GESAREX**—This in upper case medium letters for insecticides. Filed Dec. 1, 1943 by Geigy Co., New York. Claims use since Nov. 10, 1943.

**ALKEM**—This in upper and lower case extra bold letters for general cleaning compounds. Filed Nov. 28, 1942 by Alkem Products Co., Jersey City, N. J. Claims use since June 1, 1926.

**NORMA SILCREME**—This in upper case bold and regular letters for silver and metal cleanser. Filed Jan. 1, 1943 by Norma Chemical Co., Mount Vernon, N. Y. Claims use since June, 1942.

**SLICK STICK**—This in upper case medium letters for shaving stick. Filed July 21, 1943 by Delland Corp., New York. Claims use since June 8, 1942.

**HANDEE SPOTTER**—This in upper case extra bold black letters for cleaning fluid. Filed Aug. 21, 1943 by Mercer Oil and Chemical Co., Philadelphia. Claims use since 1939.

**FERRODEX**—This in upper case bold letters for metal cleaning compounds. Filed Nov. 20, 1943 by W. D. MacDermid Chemical Co., Bristol, Conn. Claims use since Aug. 20, 1943.

**SLEEPING DE SCHIAPARELLI**—This in upper and lower case bold script and regular letters for soaps. Filed Nov. 20, 1943 by Parfums Schiaparelli, Inc., New York. Claims use since Jan. 15, 1943.

**KRE-O-DOR**—This in extra bold letters for disinfectant. Filed Feb. 3, 1942 by Plunkett Chemical Co., Chicago. Claims use since Jan. 1, 1920.

**ORLOFF**—This in upper and lower case script letters for deodorants, moth preventatives, etc. Filed Nov. 25, 1942 by Jean Vivaudou Co., New York.

**CHASE 'M'**—This in upper and lower case bold letters for insect repellents. Filed Aug. 25, 1943. Claims use since Aug. 13, 1943.

**METASAP**—This in upper case stencil letters for metal soaps. Filed Nov. 3, 1943 by Metasap Chemical Co., Harrison, N. J. Claims use since January 1917.

**DRY-MO**—This in extra bold black letters for deodorant and insect repellent. Filed Nov. 16, 1943 by Hill Manufacturing Co., Atlanta. Claims use since Jan. 19, 1943.

**TRUSHAY**—This in upper case letters for hand lotion. Filed Dec. 6, 1943 by Bristol-Myers Co., New York. Claims use since Sept. 2, 1943.

**ALADERMA**—This in upper and lower case bold letters for toilet soaps. Filed Dec. 14, 1943 by Lightfoot Schultz Co., New York. Claims use since Dec. 8, 1943.

**AVADERMA**—This in upper and lower case bold letters for toilet soaps. Filed Dec. 14, 1943 by Lightfoot Schultz Co., New York. Claims use since Dec. 8, 1943.

**ACADERMA**—This in upper and lower case bold letters for toilet soaps. Filed Dec. 14, 1943 by Lightfoot Schultz Co., New York. Claims use since Dec. 8, 1943.

**DARA**—This in upper case extra bold letters for a shampoo. Filed Nov. 4, 1943, by Dara Products, Cincinnati. Claims use since Oct. 1, 1941.

**INSECT SPRAY**—This in upper case letters for insecticides. Filed June 11, 1943 by Muenster's Refinery, Inc., Muenster, Tex. Claims use since Nov. 1, 1942.

**SKAT**—This in upper case bold outline letters for protective skin cream. Filed Nov. 16, 1943 by Skat Co., Hartford. Claims use since Apr. 14, 1943.

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Anhydrous Glass . . .*



## PQ SILICATES OF SODA

WORKS: Anderson, Ind. • Baltimore, Md. • Chester, Pa. • Gardenville, N. Y. • Jeffersonville, Ind. • Kansas City, Kans. • Labuay, N. J. • St. Louis, Mo. • Utica, Ill.

SRF—This in upper case script initials for lotion and skin cream. Filed Dec. 10, 1943 by Sperti, Inc., Cincinnati. Claims use since Nov. 8, 1943.

PINAFORE—This in upper case letters for bubble bath preparation. Filed Dec. 24, 1943 by Lehn & Fink Products Corp., Bloomfield, N. J. Claims use since July 1, 1941.

#### Trade Marks Granted

405,365. Liquid soap and cleaner. Filed by Hanley & Kinsella Laboratories, Inc., St. Louis, Mo., Aug. 16, 1943. Serial No. 462,770. Published Nov. 9, 1943. Class 4.

405,407. Shampoo. Filed by Ambler Products Co., Ambler, Pa., Aug. 29, 1941. Serial No. 446,647. Published Nov. 9, 1943. Class 6.

405,415. Soapless shampoo and wash for automobiles. Filed by Nylo-foam Co., Portland, Ore., Aug. 24, 1942. Serial No. 455,082. Published Nov. 16, 1943. Class 4.

405,426. Liquid detergent. Filed by Turco Products, Inc., Los Angeles, Mar. 24, 1943. Serial No. 459,321. Published June 1, 1943. Class 4.

405,427. Shoe polish. Filed by G. Edwin Smith Shoe Co., Columbus, O., Apr. 9, 1943. Serial No. 459,771. Published Nov. 16, 1943. Class 4.

405,435. Floor wax. Filed by United Sanitary Chemicals Co., Baltimore, May 26, 1943. Serial No. 460,944. Published Nov. 23, 1943. Class 16.

405,436. Floor wax, polish and cleanser. Filed by United Sanitary Chemical Co., Baltimore, May 26, 1943. Serial No. 460,947. Published Nov. 16, 1943. Class 16.

405,442. Metal cleaning preparation. Filed by Turco Products, Inc., Los Angeles, July 5, 1943. Serial No. 461,883. Published Nov. 16, 1943. Class 4.

405,515. Disinfectant, germicide and disinfectant. Filed by Selig Co., Atlanta, Sept. 21, 1943. Serial No. 463,555. Published Nov. 16, 1943. Class 6.

405,562. Soot eradicator. Filed by G. N. Coughlan, Orange, N. J.,

Feb. 24, 1942. Serial No. 451,187. Published Apr. 21, 1942. Class 6.

405,586. Drain pipe solvent. Filed by United Gilsonite Laboratories, Scranton, Pa., July 22, 1943. Serial No. 462,239. Published Nov. 30, 1943. Class 6.

405,615. Fumigants. Filed by Kay-Fries Chemicals, Inc., West Haverstraw, N. Y., Sept. 22, 1943. Serial No. 463,571. Published Nov. 30, 1943. Class 6.

405,616. Agricultural Insecticides. Filed by Kay-Fries Chemicals, Inc., West Haverstraw, N. Y., Sept. 22, 1943. Serial No. 463,572. Published Nov. 30, 1943. Class 6.

405,617. Insecticides. Filed by Hitox Products, N. Y., Sept. 23, 1943. Serial No. 463,595. Published Nov. 30, 1943. Class 6.

405,628. Solvent for removing scale and incrustations from metal articles. Filed by Skasol Corp., St. Louis, Mo., Sept. 27, 1943. Serial No. 463,712. Published Nov. 30, 1943. Class 6.

405,629. Lanolin. Filed by Botany Worsted Mills, Passaic, N. J., Sept. 28, 1943. Serial No. 463,723. Published Nov. 30, 1943. Class 6.

405,669. Shaving cream. Filed by Rochester Laboratories, Rochester, Minn., July 22, 1942. Serial No. 454,419. Published Dec. 7, 1943. Class 4.

405,708. Rust preventative oils. Filed by Shell Oil Co., San Francisco, Oct. 5, 1943. Serial No. 463,917. Published Dec. 7, 1943. Class 15.

405,710. Shaving and toilet soap. Filed by Frank P. Hageman, Minneapolis, Oct. 11, 1943. Serial No. 461,041. Published Nov. 30, 1943. Class 4.

#### More Soap for Eire

According to a story appearing in the February 19 issue of *Foreign Commerce Weekly*, publication of the U. S. Dept. of Commerce, soap in Ireland (Eire) has been made more plentiful, effective Jan. 1, 1944. On that date six ounces per month will be allotted for each person. This represents an increase of one-third in the total amount of soap which can be used, since up until Jan. 1, only six ounces were allotted to each person for

each six weeks. The original cut to six ounces a month was made in Oct., 1942, when rationing began; the second cut requiring the six ounces to be stretched out for six weeks' use was made in Sept., 1943. The Sept., 1943 cut has been restored in this latest action. The reason given for the higher allotment is the improvement in the supply of soap-making oils.

#### Carr Heads Dearborn Chemical

Dearborn Chemical Co., Chicago, manufacturer of water treatment chemicals, has announced the election of Robert Adams Carr, former vice-president, to the position of president. Robert F. Carr, retiring from the presidency, has been elected to the newly created post of chairman of the board. George R. Carr, former vice-president and general manager, was named to the new post of chairman of the executive committee. New vice-presidents elected include Samuel C. Johnson and Roger Q. Milnes. M. H. Hagman was given the newly created post of assistant secretary and A. H. Reynolds, chief chemist, was named directing chemist.

#### Wishnick-Tumpeer Becomes Witco

Wishnick-Tumpeer, Inc., New York, manufacturers and distributors of chemicals, pigments and asphalt products changes its name, effective March 1, to Witco Chemical Co. The change of name has been made in order that it describe the company's activity in the chemical field. No changes in corporate structure, management or personnel are affected by the change in name, which is based on the company's long established trade mark "Witco." The company was founded in 1920 and in the years that followed expanded the scope of its line of chemical products as well as its manufacturing facilities. In 1926 Wishnick-Tumpeer acquired the Pioneer Asphalt Co. plant in Lawrenceville, Ill., followed in 1933 by the purchase of Panhandle Carbon Co., Borger, Tex., where Witco carbon blacks have been manufactured ever since. Four years ago a new research laboratory was added in Chicago, along with the erection of a plant for the manufacture of chemical specialties.





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**FOR THE BATTLE FRONT...**  
**LESS FOR THE HOME FRONT**

*"No soldier in the world, whether he is in the armies of our allies or our enemies, receives better medical attention, on and off the battlefield, than the man who fights for America."*  
 Surgeon General, U. S. Army

Into the manufacture of the vast quantities of ointments, salves, lotions, creams and similar products needed by the Medical Corps go great quantities of Lanolin U.S.P.

To be certain that war needs are met first, Lanolin, Degras and other grades of Wool Grease have been placed on allocation.

Some manufacturers have been asked to do without or with less Lanolin and Wool Grease so that it can be used for this and many other vital war purposes to help hasten the day of victory. The sooner it comes, the faster you can have all the Nimco Brand Lanolin, Degras and Wool Grease you want.



*Lanolin and Wool Greases*  
 HELP FIGHT FOR VICTORY  
**PRACTICE CONSERVATION**  
*of Essential Materials*  
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America's Largest Suppliers of { **LANOLIN** • Anhydrous U.S.P. • Hydrous U.S.P. • Absorption Base • Technical  
**DEGRAS** • Neutral and Common • Wool Greases

147 LOMBARDY STREET • BROOKLYN, NEW YORK

As of March 3, 1944

**B**Y all odds the current position of fats and oils is believed to be stronger than at any time since the banner production year of 1941—a year in which an estimated 3.1 billion pounds of soap were produced. Whether the present easier condition will continue throughout the remainder of the year is not known; the possibility that a tightening in the fats and oils supply may be necessary toward the end of the year is felt in some quarters to be not unlikely. The reason for this being that while production of fats and oils from domestic materials is substantially higher than at any time heretofore, military and lend-lease requirements are likely to grow.

#### Lift Lard Rationing

Indicative of the present strength of the oils and fats situation in two directions at least are the announcements that lard rationing has been discontinued and that tallow inventory controls have been liberalized. Inversely, further evidence of the state of the picture may be found in the sudden dropping, this past month, of talk about the dire need to use linseed oil in the manufacture of soaps. The immense lard overage, which has been hinted at from time to time in newspaper stories, can readily be seen in the U. S. Department of Agriculture's figures for the past fourteen months. For example, U. S. cold storage holdings on Jan. 1, 1944 were 147,334,000 pounds as compared with 82,776,000 pounds on the same date one year earlier. Chicago stocks on corresponding dates were 26,733,756 pounds this year, as against 11,090,547 pounds for last year. On Feb. 1, 1944 there were 230,496,000 pounds of lard in U. S. cold storage holdings; on Feb. 1, 1943, there were 105,423,000 pounds. On February 15, 1944, Chicago lard stocks were reported at 50,288,465 pounds compared with 13,134,329 pounds a year earlier.

#### Hog Slaughter Rises

At the same time, federally inspected hog slaughter continued its rise. The record figure since 1941 was recorded in January of this year when 7,839,352 pounds were slaughtered. This figure compares favorably with the 5,430,909 pounds slaughtered in Jan., 1943 and 7,566,817 pounds slaughtered in Dec., 1943.

Lard's desirability as a soap raw material exceeds that of linseed oil, since it is odor free; its high price, however, continues to be a limiting factor. On the other hand, its use has permitted the diversion of tallow for use in the production of soaps for the synthetic rubber program.

Coupled with the greater availability of lard is the news of the improvement in the tallow supply picture which is in sharp contrast with the situation several months ago. The seasonal, though somewhat latterly, marketing of cattle is now resulting in greatly increased tallow production. This fact is borne out by the recent ruling raising tallow inventories from 60 to 90 days.

#### The Overall Picture

The overall picture as outlined by the U. S. Department of Agriculture shapes up in about the following fashion: "Total production of fats and oils from domestic materials in the calendar year 1944 may be about 11.2 billion pounds compared with 10.8 billion pounds in 1943. Stocks on Jan. 1, 1944 were moderately higher than a year earlier and imports are expected to increase in 1944. Hence, the total supply of fats and oils in the United States will be substantially greater than in 1943. Little change is likely, however, in supplies available for civilian consumption. With an increased number of men in the armed forces, military takings will expand. Exports of fats and oils under lend-lease are expected to increase moderately, and European relief requirements, if the war in Europe ends in 1944, probably

would add to the demand for domestic supplies. Increased production of fats from domestic materials and increased imports in late 1943 have somewhat eased the situation in fats and oils that existed at the end of last summer. The improvement has come almost entirely, however, in linseed oil and in technical oils not suitable for food purposes. The relative scarcity of food fats remains and is likely to continue through 1944. Linseed oil, which is in fairly abundant supply, can be adapted for edible use. Substantial quantities of this oil probably will be exported in 1944, as in 1943, to meet Russian requirements for food fats."

The Department of Agriculture's expectation that imports will increase in 1944 is borne out by one spokesman for a large importing house who felt that if the situation continued to improve it was thought likely that government control of imports might be turned back into private channels. If this is to happen, an even larger increase in imports may be expected in the coming year, it was said. Northwest and east Africa still continue to be our chief sources of imports, although the South American picture, continues to be good, providing nothing untoward politically takes place in our big South American supplier, Argentina. The greatly improved shipping situation should also augment our domestic supply of oils and fats.

(A complete summary of the essential oil outlook is presented on pages 21-23 of this issue.)

#### Outlines Some Soap Uses

In *Domestic Commerce*, published by the U. S. Dept. of Commerce, for Feb., 1944, there appears an article entitled, "Soap Greases Ways of War Production" by Dorothy P. Bayles of the Fats and Oils Unit, of the Bureau of Foreign and Domestic Commerce, which discusses the 190 million pounds of soap to be produced for industry in 1944.



**SARGENT'S DRYER and CHILLING ROLL**

One of the latest Sargent installations, a unit capable of delivering 1300 pounds of extremely thin soap chips in 40 feet. Economy of operation and floor space are distinct features of this equipment. Mechanical refinements, compactness and accessibility are inherent characteristics. Write for complete details and specifications.

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### **HARDESTY FATTY ACIDS**

are especially designed for the replacement of high grade tallows and other scarce natural fats in the manufacture of hard toilet and laundry soaps . . . for exact chemical control in the manufacture of specification soaps . . . titres all the way from 40 up to 60.

**RED OIL**  
(Saponified)

**STEARIC ACID**  
(Distilled)

### **HYDROGENATED FATTY ACID**

Cotton Red Oil Fatty Acids  
Palm Oil Fatty Acids

Hydrex

Corn Oil Fatty Acids  
Specialty Fatty Acids

**GLYCERINE • PITCH • WHITE OLEINE**

### **FACTORIES**

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# RAW MATERIAL

# PRICES

(As of February 25, 1944)

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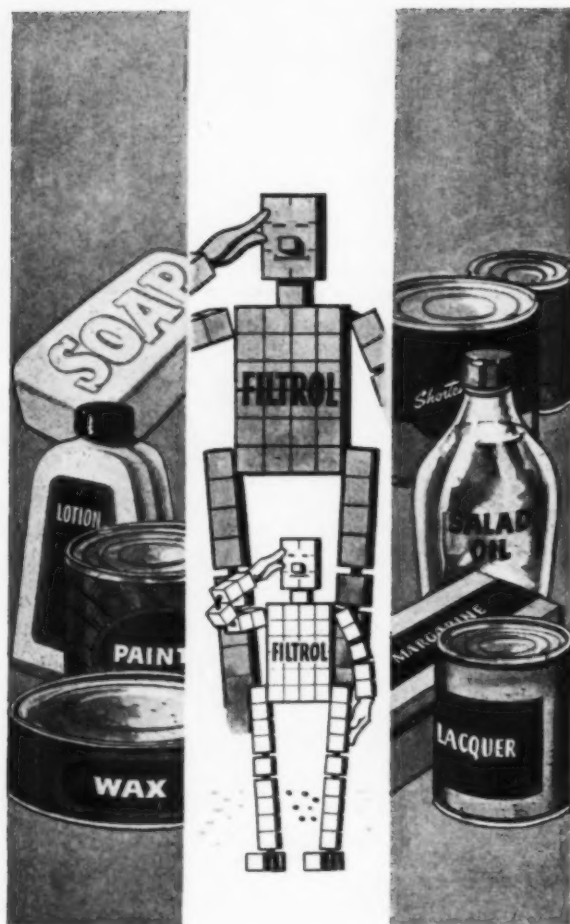
## Chemicals

Acetone, C. P., drums	lb.	\$ .08½	\$ .09
Acid, Boric, bbls., 99½%	ton	109.00	126.00
Cresylic, drums	gal.	.81	.83
Low boiling grade	gal.	.81	.83
Muriatic, C.P., carboys	lb.	.06½	—
Oxalic, bbls.	lb.	.11½	.12½
Alcohol, Ethyl, drums	gal.	11.94½	11.98
Complete Denat., SDI, dms., ex.	gal.	.62	.64
Alum. Potash lump, bbls.	lb.	.04½	—
Ammonia Water, 26°, drums	lb.	.02½	.02½
Ammonium Carbonate, tech., drums	lb.	.08½	.09½
Bentonite	ton	11.00	16.00
Bleaching Powder, drums	100 lb.	2.50	3.75
Borax, pd., bbls., bags	ton	41.50	76.00
Carbon Tetrachloride, car lots	gal.	.60	1.17
L. C. L.	gal.	.80	1.27
Cresol, U.S.P., drums	lb.	.10½	.11½
Cresote Oil	gal.	.15½	—
Feldspar, works	ton	14.00	20.50
Formaldehyde, bbls.	lb.	.05½	.06½
Fullers Earth	ton	8.50	15.00
Glycerine, C.P., drums	lb.	.18½	.19½
Dynamite, drums	lb.	.18½	.18½
Saponification, drums	lb.	.12½	.14½
Soap lye, drums	lb.	.11½	—
Lanolin, U.S.P., hydrous, drums	lb.	.32½	.34
Anhydrous, drums	lb.	.34	.35½
Lime, live, bbls.	ton	6.25	16.00
Mercury Bichloride, drums	lb.	2.24	—
Naphthalene, ref. flakes, bbls.	lb.	.08	.08½
Orthodichlorobenzene	lb.	.07	.08
Paradichlorobenzene, drums	lb.	.11	.15
Petrolatum, bbls. (as to color)	lb.	.021	.08
Phenol (Carbolic Acid) drums	lb.	.10	.10½
Pine Oil, drums	gal.	.62	.73
Potash Caustic, solid	lb.	.06½	.06½
Flake, 88-92%	lb.	.07	.07½
Liquid, 45% basis	lb.	.03	.03½
Potassium Carbonate, solid	lb.	.06½	.06½
Liquid	lb.	.05½	.05½
Pumice Stone, coarse	lb.	.03½	.04½
Rosins (net wt., ex dock, New York)—			
Grade D to H	100 lb.	4.62	5.02
Grade I to N	100 lb.	5.03	5.32
Grade WG to X	100 lb.	7.03	7.25
Rotten Stone, dom., bags	lb.	.0128	.019
Silica	ton	17.00	38.00
Soaps—			
Tallow Chip, 88%	lb.	.11	.11½
Powder, 92%	lb.	.11½	.12
Powdered, White Neutral	lb.	.25½	.42
Olive Oil Paste	lb.	.40	—
Shampoo Base	lb.	.18	.20
Liquid Concentrate, 30-32%	gal.	.75	.79
Soda Ash, cont., wks., bags, bbls.	100 lb.	1.15	3.25
Car lots, in bulk	100 lb.	.90	.95
Soda, Caustic, cont., wks. solid	100 lb.	2.30	3.55
Flake	100 lb.	2.70	5.70
Liquid, tanks, 47-49%	100 lb.	1.92½	1.95

Soda Sal., bbls.	100 lb.	1.20	1.40
Sodium Chloride (Salt)	ton	14.20	18.00
Sodium Fluoride, bbls.	lb.	.07	.06
Sodium Bisulfate	100 lb.	2.20	2.40
Sodium Metasilicate, anhyd.	100 lb.	4.00	5.30
Granulated	100 lb.	2.50	3.55
Sodium Pyrophosphate	100 lb.	5.28	6.60
Sodium Silicate, 40 deg., drum	100 lb.	.80	1.20
Drums, 52 deg. wks.	100 lb.	1.40	1.80
Tar Acid Oils, 15-25%	gal.	.26½	.33½
Triethanolamine	lb.	.19	.20
Trisodium Phosphate, bags, bbls.	100 lb.	2.70	3.40

## Oils — Fats — Greases

Babassu, tanks, futures	lb.	.1110	Nom.
Castor, No. 1, bbls.	lb.	.1300	—
No. 3, bbls.	lb.	.1375	.1425
Coconut (without excise tax)			
Manila, tanks, N. Y.	lb.	.0835	—
Tanks, Pacific Coast, futures	lb.	No Prices	—
Copra, bulk, coast	lb.	No Prices	—
Corn, tanks, West	lb.	.12½	—
Cottonseed, crude, tanks, mill	lb.	.12½	—
PSY, futures	lb.	.14	—
Fatty Acids—			
Corn Oil, tanks, Chicago	lb.	.14	.14½
Coconut Oil, tanks, Twitchell, Chi.	lb.	.15½	.17½
Cotton Oil, tanks, Chicago	lb.	.11½	.14½
Settled soap stock, Chicago	lb.	.03½	.04
Boiled soap stock, 65%, Chi.	lb.	.04½	.05
Foots, 50%, Chicago	lb.	.03½	.03½
Castor Oil, split, tanks, N. Y.	lb.	.20½	.21½
Linseed Oil, split, tanks, N. Y.	lb.	.1530	—
Distilled	lb.	.21½	.22
Myristic acid, distilled, tanks, N.Y.	lb.	.19	.19½
Palm Oil, white tanks, N. Y.	lb.	.12½	—
Single distilled	lb.	No Prices	—
Soybean Oil, split, tanks, N. Y.	lb.	.1175	—
Distilled	lb.	.15½	—
Red Oils, bbls., dist. or sapon	lb.	.1325	.1475
Tanks	lb.	.12½	—
Stearic Acid, saponif.			
Double pressed	lb.	.15½	.16½
Triple pressed	lb.	.18½	.19½
Greases, choice white, tanks	lb.	.08½	—
Yellow	lb.	.08½	—
Lard, city, tubs	lb.	.1400	—
Linseed, raw, bbl.	lb.	.1530	—
Tanks, raw	lb.	.1470	—
Olive, denatured, bbls., N. Y.	gal.	No Stocks	—
Foots, bbls., N. Y.	lb.	No Stocks	—
Palm, Sumatra, cif. New York, tanks	lb.	No Prices	—
African, tanks, ex. ship	lb.	.08½	Nom.
Palm, kernel	lb.	No Prices	—
Peanut, crude, tanks, mill	lb.	.13	Nom.
Soya Bean, domestic, tanks, crude	lb.	.11½	Nom.
Stearin, oleo, bbls.	lb.	.13½	—
Tallow, special, f.o.b. N. Y.	lb.	.08½	—
City, ex. loose, f.o.b. N. Y.	lb.	.08½	—
Teaseed Oil, crude	lb.	.29	Nom.



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(As of March 2, 1944)

## Essential Oils

Almond, Bitter, Artificial	lb.	\$ .85	\$ .98
Bitter, F.F.P.A.	lb.	5.25	7.00
Sweet, cans	lb.	2.00	2.75
Anise, cans, U.S.P.	lb.	3.50	4.00
Bay, 55-60% phenols, cans	lb.	1.60	1.90
Bergamot, coppers, S.A.	lb.	8.25	—
Artificial	lb.	2.25	4.50
Birch Tar, rect., cans	lb.	3.00	3.25
Crude, cans	lb.	2.00	2.25
Bois de Rose, Brazilian	lb.	4.75	5.75
Cayenne	lb.	1.05	—
Cade (juniper tar), drums	lb.	1.25	1.50
Cajeput, tech., drums	lb.	1.55	2.25
Calamus, cans	lb.	22.50	35.00
Camphor, Sassy, drums	lb.	—	—
White, drums	lb.	.48	—
Cananga, native, cans	lb.	8.10	8.75
Rectified, cans	lb.	8.90	11.00
Cassia, Redistilled, U.S.P.	lb.	10.50	12.50
Cedar Leaf, cans	lb.	1.10	1.45
Cedar Wood, light, drums	lb.	.55	.70
Citronella, Java, drums	lb.	2.50	2.80
Citronella, Ceylon, drums	lb.	.90	1.05
Clove, U.S.P., cans	lb.	1.65	1.75
Eucalyptus, Austl., U.S.P., cans	lb.	1.02	1.18
Fennel, sweet, cans	lb.	3.00	3.90
Geranium, African, cans	lb.	13.00	16.00
Bourbon, cans	lb.	13.00	16.00
Turkish (Palmarosa)	lb.	5.00	5.50
Hemlock, cans	lb.	1.25	1.45
Lavender, 30-32% ester cans	lb.	7.50	—
Spike, Spanish, cans	lb.	3.60	4.75
Lemon, Ital., U.S.P.	lb.	—	—
Cal.	lb.	3.25	—
Lemongrass, native, cans	lb.	1.15	1.30
Linaloe, Mex., cases	lb.	3.25	3.75
Nutmeg, U.S.P., cans	lb.	4.50	7.00
Orange, Sweet, W. Ind., cans	lb.	4.00	5.00
Italian cop	lb.	—	—
Distilled	lb.	.75	.78
California, expressed	lb.	1.00	1.50
Origanum, cans, tech.	lb.	2.40	3.00
Patchouli	lb.	6.60	9.00
Pennyroyal, dom.	lb.	—	—
Imported	lb.	3.00	4.10
Peppermint, nat., cans	lb.	6.00	—
Redis., U.S.P., cans	lb.	6.35	—
Petitgrain, S. A., cans	lb.	1.50	1.75
Pine Needle, Siberian	lb.	3.10	3.50
Rosemary, Spanish, cans	lb.	1.90	2.00
drums	lb.	1.50	1.65
Sandalwood, dom., dist., U.S.P.	lb.	6.25	6.75
Sassafras, U.S.P.	lb.	1.90	2.25
Artificial, drums	lb.	1.25	1.40
Spearmint, U.S.P.	lb.	4.00	—
Thyme, red, N.F.	lb.	2.50	3.25
White, N.F.	lb.	2.65	4.00
Vetiver, Java	lb.	25.00	45.00
Ylang Ylang, Bourbon	lb.	11.00	14.00

## Aromatic Chemicals

Acetophenone, C. P.	lb.	\$ 1.55	\$ 1.60
Amyl Cinnamic Aldehyde	lb.	2.00	5.00
Anethol	lb.	1.85	2.35
Benzaldehyde, tech.	lb.	.45	.55
N. F. VI	lb.	.85	.98
Benzyl, Acetate	lb.	.60	Nom.
Alcohol	lb.	.68	.75
Citral	lb.	2.85	5.00
Citronellal	lb.	2.75	3.25
Citronellol	lb.	6.00	7.00
Citronellyl Acetate	lb.	8.60	8.60
Coumarin	lb.	2.75	3.25
Diphenyl oxide	lb.	.48	.63
Eucalyptol, U.S.P.	lb.	2.50	3.25
Eugenol, U.S.P.	lb.	2.50	3.05
Geraniol, Soap	lb.	2.50	3.00
Other grades	lb.	3.50	4.00
Geranyl Acetate	lb.	—	—
Heliotropin	lb.	3.25	3.40
Hydroxycitronellal	lb.	8.50	9.00
Indol, C. P.	lb.	26.00	27.50
Ionone	lb.	3.40	5.75
Isoborneol	lb.	.81	1.10
Iso-borynl acetate	lb.	.85	1.00
Iso-Eugenol	lb.	3.90	4.00
Linalyl Acetate	lb.	5.50	10.00
Linolool	lb.	6.60	8.00
Menthol, natural	lb.	—	—
Synthetic, U.S.P.	lb.	13.00	19.00
Methyl Acetophenone	lb.	1.60	—
Anthranilate	lb.	2.20	2.50
Paracresol	lb.	—	—
Salicylate, U.S.P.	lb.	.40	.92
Musk Ambrette	lb.	9.50	14.00
Ketone	lb.	4.50	12.00
Xylol	lb.	1.40	2.90
Phenylacetaldehyde	lb.	2.60	3.00
Phenylacetic Acid	lb.	1.60	3.00
Phenylethyl Alcohol	lb.	2.38	2.75
Rhodinol	lb.	—	—
Safrol	lb.	1.35	1.75
Terpineol, C.P., dra.	lb.	.37	—
Cans	lb.	.42	—
Terpinyl Acetate, 25 lb. cans	lb.	.95	1.15
Thymol, U.S.P.	lb.	2.60	Nom.
Vanilin, U.S.P.	lb.	2.60	2.90
Yara Yara	lb.	1.83	2.00

## Insecticide Materials

Insect Powder, bbls.	lb.	.29	.30
Pyrethrum Extract			
20 to 1	gal.	5.75	—
30 to 1	gal.	8.53	—
Derris, powder—4%	lb.	.31	—
Derris, powder—5%	lb.	.35	—
Cube, powder—4%	lb.	.31	—
Cube, powder—5%	lb.	.35	—
Squill, red, dried	lb.	.85	.88

## Waxes

Bees, white	lb.	.57	.63
African, bgs.	lb.	.3750	—
Refined, yel.	lb.	.5250	.6050
Candelilla, bgs. (crude)	lb.	.38	—
Carnauba No. 1, yellow	lb.	.8325	.8925
No. 2, N. C.	lb.	.7575	.8575
No. 3, Chalky	lb.	.7125	.8125
Ceresin, yellow	lb.	.13½	.18
Montan Wax, bags	lb.	—	—
Paraffin, ref., 125-130	lb.	.0520	.0560

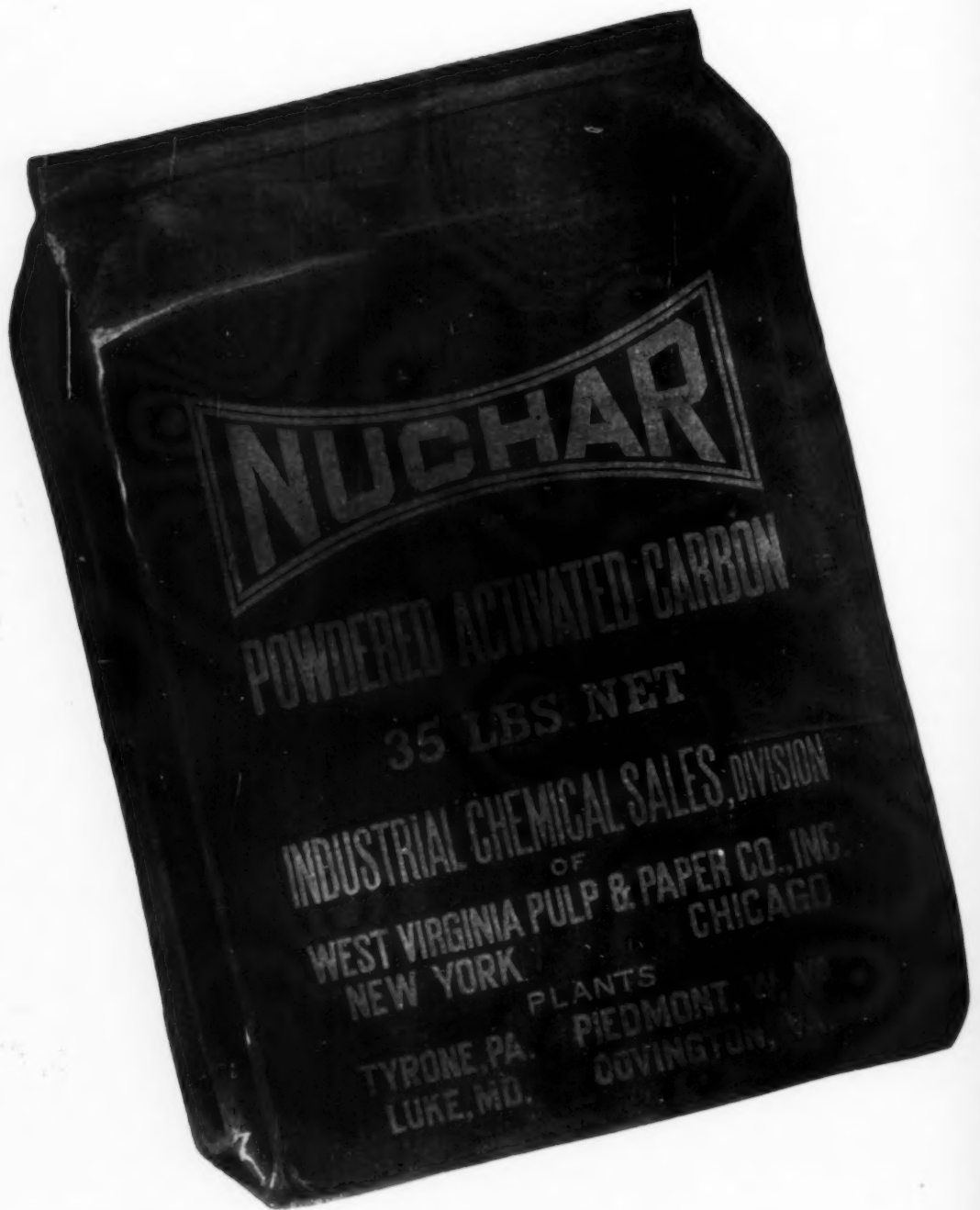
March, 1944


SOAP and SANITARY CHEMICALS

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# PRODUCTION SECTION

A section of SOAP devoted to the technology of oils, fats, and soaps published prior to Jan. 1, 1932, as a separate magazine under the title, Oil & Fat Industries.

## Chlorinated Dry-cleaning Solvents

THE function of the solvent in dry cleaning is to remove soluble soil such as spots of mineral, vegetable and body oils, and to extract the general oil film that causes dirt to adhere to the fibers. After the oil film is removed, the dirt is loosened from the fabric by agitation in the washer and becomes suspended so that it passes out of the washer with the solvent.

With the use of chlorinated solvents, recovery is important. The condensation recovery system is similar to a dehumidifying system, the solvent is recovered by passing the solvent-laden air over a cooling coil, using water as the cooling medium. A filter to remove insoluble soil and a still to remove soluble contamination are used.

Since no solvent is ideal, choice is made on the basis of a balance of the various factors involved. The properties to be considered are solvent power, surface properties, vapor pressure, and stability. The solvent must have no detrimental effect on dyes or fabrics. This has become increasingly important during recent years due to the development of so many synthetic fibers.

Vapor pressure of the solvent is important; if it is low, recovery of the vapor is easier but distillation and drying become difficult. A solvent with a low vapor pressure has the further disadvantage of low-boiling impurities passing over during distillation. On the other hand, with a solvent having too high a vapor pressure, it is difficult to control normal vaporization or to

recover solvent by condensation from the air during drying.

The chlorinated solvents generally used for dry cleaning are carbon tetrachloride, perchloroethylene, and trichloroethylene, although mixtures containing other chlorinated hydrocarbons or inhibitors and stabilizers are sometimes used.

Neither carbon tetrachloride nor perchloroethylene has any detrimental effect on common fabrics under the normal conditions of operation. Trichloroethylene is inclined to soften cellulose acetate and run the dye at higher temperatures. Dry-cleaning machines using trichloroethylene usually provide means for keeping the solvent cool during warm weather. Ethylene dichloride, methylene chloride and chloroform all dissolve or soften cellulose acetate and therefore are not suitable for dry cleaning unless used in low concentrations in combination with one of the other solvents.

All of the chlorinated hydrocarbons are good solvents for mineral and vegetable oils, fats and waxes. Carbon tetrachloride, perchloroethylene have less effect on tars and resins, while ethylene dichloride and chloroform dissolve them readily. Methylene chloride is a good solvent for tars and for paint and varnish films. The types of stain not dissolved by the chlorinated hydrocarbons are from water-soluble materials such as sugar, syrups and fruit juices.

All of the chlorinated hydrocarbons wet fabrics readily and are rea-

sonably satisfactory in creating a suspension of insoluble impurities. They are not ideal in this respect, however, since the building up of static during the operation often causes redeposition of soil and the graying of light garments. For this reason, the use of dry-cleaning soap is advantageous.

In the presence of both solvent and water, wool is preferentially wet by solvent while cotton is preferentially wet by water. Insoluble soil is suspended satisfactorily in solvent if water is absent, but in the presence of water, preferential wetting causes the soil to be suspended in the water layer. Occasionally this creates unsatisfactory cleaning if appreciable amounts of water are present, since the cotton parts of the garments will soak up the dirt-laden water. The preferential wetting of cotton by water is used to advantage as a means of removing small amounts of water from the system by running a load of cotton cloths.

Oxidation of those solvents which are unsaturated compounds will take place if the solvent is subjected to light, particularly ultra-violet. In the absence of the catalytic effect of light, the oxidation, with formation of acid, does not take place to an appreciable extent until temperatures somewhat above the boiling point are reached. It then occurs rapidly over a small temperature range.

Saturated compounds are primarily subject to hydrolysis, which takes place if water or water vapor is in contact with the solvent. The rate

of hydrolysis increases rapidly with temperature and is catalyzed by certain metals and by some of the dirt and impurities in used solvent. The acid accumulates in the water layer, so that corrosion ordinarily takes place where the water layer is in contact with metal or where the water vapor-acid mixture condenses. A mixture of warm moist air and solvent vapor in a shut-down machine is an ideal condition for hydrolysis and corrosion.

When chloroform is mixed with carbon tetrachloride, the boiling point is raised over that of pure chloroform. The rate of corrosion of copper by such a mixture is lower than that by carbon tetrachloride. The reduction is approximately in proportion to the amount of chloroform in the mixture. O. C. Cessna. *Canadian Chem. & Process Industries* 28, No. 1, 7-9 (1944).

#### Fatty Acid Distillation

Material high in free fatty acids is distilled in a continuous process so as to yield all of the free fatty acids in substantially pure form, leaving an undistilled residue. The material is passed through a heating zone, then into a hot liquid body of undistilled residue at a reduced pressure. Most of the free fatty acids vaporize instantaneously and project the undistilled residue against a baffle. Fatty-acid vapors are withdrawn continuously and condensed. The undistilled residue is also withdrawn continuously. V. Mills, to The Procter & Gamble Co. of Canada, Ltd. Canadian Patents 417,720 and 417,721.

#### Fluorescence and Rancidity

A lack of correlation between either the peroxide value or the stabilities measured in conventional ways, and the amount of chlorophyll fluorescence of several fats makes the "chlorophyll value" test appear to have doubtful value as a generally applicable test for fat rancidity or stability. Absorption curves suggest that the greater absorption of near ultraviolet light by oxidized fats may be related to their content of fat peroxides. C. S. French and W. O. Lundberg. *Oil & Soap* 21, 23-7 (1944).

#### Soap in Wool Processing

The removal of the natural fat in wool fibers is an unusual problem, and one that has even now not been completely solved. A solution of soap and ammonia is frequently used, the ammonia reinforcing the soap as the bath becomes used up. The more usual caustic soda is not as applicable because the residual soda after rinsing results in differential absorption of dyes and may turn the wool yellow during steaming.

In one method of grease removal, the raw wool is saturated with a fatty acid such as stearic or oleic, until the impurities are permeated with it. The excess is squeezed out and the wool is then treated with a mild alkali, which converts the fatty acid to soap. By thus attacking from within, the subsequent washing process is made more efficient.

In applying oil to wool to prevent breakage during spinning and weaving, results are improved by mixing mineral oil with a wool-fat derivative which consists of a mixture of cholesterol with long-chain alcohols from hydrolyzed wool fat. The cloth may then be rinsed readily with a solution containing 0.4 per cent of sodium oleate soap and 0.2 per cent of soda ash. *Textile Colorist* 66, No. 1, 40 (1944).

#### Rot-proofing Agent

Copper naphthenate prevents rotting of cotton fabric in soil at lower concentrations on the fabric than do copper oleate, the copper salt of tall oil, or the copper salt of hydrogenated resins. Several methods have demonstrated that the high preservative capacity of copper naphthenate in contact with soils is related to the fact that naphthenic acid itself is a potent fungicide.

Fabrics treated with copper oleate, copper naphthenate and copper tallate lose copper readily at the points where the fabric is in contact with soil. Each of these compounds is highly insoluble in water but may be solubilized by acid hydrolysis or by reaction with materials which form soluble copper complexes. Copper hydrogenated resinate is highly resistant to leaching under the conditions listed

above. Its relatively poor protective power in contact with soils may be in part due to the low availability of ionic copper.

The relative superiority of copper naphthenate in comparative tests with the other three copper soaps studied, is accentuated by soil factors tending to minimize the preservative value of copper, namely, leaching, adsorption and chemical deactivation. P. B. Marsh, G. A. Greathouse, K. Boltenbacher, and M. L. Butler. *Ind. Eng. Chem.* 36, 176-81 (1944).

#### Solubilizing Power of Soap

The bringing of water-soluble dye into stable colloidal solution by means of potassium soap, has been studied with four soaps over a range of concentrations to determine equilibrium conditions. The solubilizing power increases so rapidly with the higher soaps as to cast doubt on the earlier suggestion that it is solution of the water-insoluble material in the hydrocarbon fraction of the molecule. Instead it seems probable that such material is incorporated between the layers of lamellar micelles of the soap.

Potassium chloride not only greatly increases the solubilizing power of fully formed micelles, but it produces in dilute solution micelles of still higher solubilizing power. J. W. McBain and K. E. Johnson. *J. Am. Chem. Soc.* 66, 9-13 (1944).

#### Soap Renovates Army Shoes

Worn shoes no longer fit to wear are collected from the fighting fronts and sent to two Army shoe rebuilding plants, one in Missouri and the other in Georgia. Soap plays an important part in the renovation of these shoes. The shoes are inspected, sorted and graded, after which they are sent to washing tanks where they are dipped and whirled in a soap solution for five minutes and then rinsed for two minutes. This is followed by thorough sterilization and a mildew-proofing treatment. The shoes then are given mechanical attention in which the worn parts are replaced or repaired and the shoes completely renovated, ready for issue again. *Bull. Assoc. Am. Soap & Glycerine Producers*, Jan., 1944.



# Characteristics of Tall Oil

TALL oil is a natural mixture recovered from pine wood in the alkaline paper pulp process. When pine-wood chips are heated under pressure with caustic solutions, the cellulose portion remains insoluble and forms the paper pulp. The remainder of the wood becomes soluble and forms the "black liquor." Fatty- and rosin-acid soaps form a part of this black liquor. The latter is concentrated by evaporation, when the soap becomes insoluble and floats to the surface. The soap is then skimmed off. By acidification with mineral acid, tall-oil skimmings are converted to crude tall oil. This contains fatty acids, rosin acids, and unsaponifiable matter consisting largely of sterols.

A study of these components indicates that in the fatty-acid portion, only 18-carbon, unsaturated fatty acids are present. While abietic acid is present in the rosin-acid portion, substantial amounts of these acids are liquids, indicating the presence of acids other than abietic, which is a solid. The unsaponifiable matter will not separate out of tall-oil soap solutions, no matter how dilute these are. The relative amounts of the three groups of compounds vary widely, depending on the nature of the wood itself.

Crude tall oil can be refined by various processes to give a light-colored oil of mild odor. Vacuum distillation is the most widely used method. Little difference in chemical behavior is found between crude and refined tall oil, so that the majority of consumers have been able to use either grade unless color and odor are of primary importance. The range and analyses of these products as offered by a leading American producer are given in the table.

	Tall Oil	
	Crude	Refined
Acid number .....	160-170	170-180
Saponification number .....	165-175	170-185
Rosin-acids number .....	80-90	63-71
Wijs iodine number .....	140-150	—
Ash, less than, % .....	0.4	0.1
Fatty acids, % .....	45-50	55-60
Rosin acids, % (calcd. as abietic) .....	42-48	34-38
Sterols, higher alcohols etc., % .....	6-9	6-10

Uses for tall oil have been developed in many fields. Its fatty-acid nature makes it useful in the manufacture of soaps and soap products, and as the emulsifying agent in a large number of soap-base emulsified products. Metallic soaps of tall oil are used in waterproofing and mildew-proofing textile fabrics, in point driers and in lubricating greases. Sulfonated tall oil is used as a Turkey-red oil substitute in textile plants and in the manufacture of coated papers. R. Hastings. *Am. Dyestuff Reporter* 33, 25-6 (1944).

## Test for Bicarbonate in Soap

A rough test for ascertaining the amount of bicarbonate in a mixture of carbonate and bicarbonate in the presence of alkaline salts such as sodium pyrophosphate, silicate and others, is based on the fact that bicarbonates will liberate hypochlorous acid from hypochlorites. In the presence of potassium bromide, bromine will be liberated by the hypochlorous acid and can be extracted by chloroform or carbon tetrachloride. The depth of color obtained gives an approximation of the amount of bicarbonate present.

A series of soap samples which were shown to contain sodium bicarbonate by the carbon dioxide evolution method gave positive results when tested in accordance with the procedure recommended. E. W. Blank and L. E. Utter. *Oil & Soap* 21, 27-8 (1944).

## Control in Glycerine Production

In the analytical control of glycerine production it is important that the appropriate method be used for the sample concerned. Otherwise the impurities may give rise to an apparent glycerol content much higher than the actual one. In general, an acetylation method is used for spent lyes, crudes, refined glycerines and samples such as press mud washings likely to contain oxidizable impurities. Oxidation methods are used for fats, soaps and for lyes that are known to

be of good quality. They are less tedious than the acetylation processes and almost as consistent.

Trimethylene glycol, which is one of the commonest interfering substances, and which vitiates both acetylation and oxidation processes, has less effect on the former. An acetylation method is therefore to be preferred; but where the proportion of trimethylene glycol or any other impurity which cannot be satisfactorily removed is high, it is more accurate to use the isopropyl iodide or copper chloride method. J. L. Boyle. *Manufacturing Chemist* 14, 389-92 (1943).

## Rinsing Efficiency in Laundry

The cumulative build-up of insoluble residues, indicating incomplete rinsing, is one of the surprising facts uncovered by Westinghouse research into laundry methods. The previous method for checking rinsing efficiency has been to compare the water after rinsing with fresh water intake from a chemical point of view. This has been found to be unsound practice.

A new laboratory method is more effective and precise. A fabric is successively washed and dried many times. After each washing a sample is cut from it and burned. This removes all organic material and leaves an ash made up of the inorganic oxides of substances originally present in the curds. Weighed, the ash provides an accurate measure of the effectiveness of rinsing.

The experiments show a great variation in results with different methods of rinsing. It is not uncommon to find, even with rinsings previously considered good, that the ash increases from 5 per cent after the first washing, to over 60 per cent after 50 washings. Hardness of the water in amount and kind of dissolved salts greatly influences the results. *Rayon Textile Mo.* 25, 101 (1944).

## Phenol Differentiation

Qualitative tests for phenol employing ferric chloride, hypochlorite and other reagents, have been modified to permit differentiation between phenol and *ortho*-, *meta*-, and *para*-cresol. Wm. B. Deichmann. *Ind. Eng. Chem., Anal. Ed.* 16, 37-8 (1944).

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# NO STAYBOLTS TO CAUSE LEAKS ON THIS CRUTCHER

## PERFECTION JACKETED CRUTCHER

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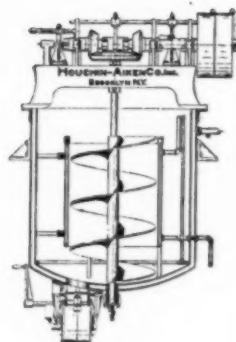
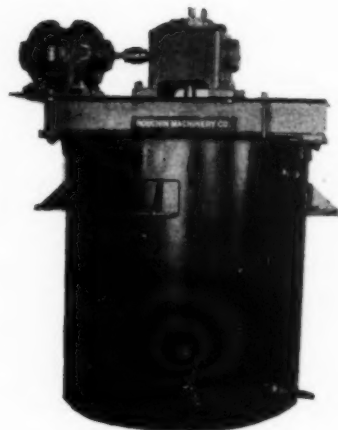
The inside surfaces are smooth and  
the entire machine is more durable  
and extremely easy to clean.

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ing and steel-hardened disc, taking  
all the weight off the gears.

Particularly efficient for making  
laundry, floating, cold-process, half-  
boiled, automobile, liquid, and similar  
soaps.

Made of plain steel, nickel-clad steel  
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Chippers	Amalgamators	Mills	Plodders	Slabbers
Cutting Tables	Crutchers	Can-top Sealers	Etc.	

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HAWTHORNE, N. J.

### Hardness Determination

One hundred cc. of sample are neutralized with alkali and aerated with 100-200 cc. of air per minute through a 4-cm. fritted glass disk. Then three drops of ammonia are added and Pellet's soap solution is rapidly introduced. At first the air bubbles break through the surface and disappear, but as soon as bubbles of foam rise along the walls of the vessel the soap solution is added, a drop at a time, until the surface is covered with a thin layer of large bubbles of foam. The solution is then mixed by raising and lowering the aerator tube and a drop of soap solution is added every 10-15 seconds. At the end point the foam consists of fine bubbles which rise steadily.

This aeration method is faster than the shaker method because there is no need to interrupt the titration. With waters low in magnesia, good results are obtained up to 10° hardness. Waters that contain a high magnesia hardness should be diluted so that the total hardness is not more than 5°. Neutralization before titration is necessary, but a slight excess of alkali does no harm. No sodium chloride should be added when the usual soap solutions are used, such as Pellet's or Boutron and Boudet's, since low results are then obtained. B. Brukner and E. Wachtler. *Z. Wirtschaftsgruppe Zuckerind.* 92, 144-51.

### Fat Splitting

Oils or fats are autoclaved with water under pressure. The mixture is decompressed, thus evaporating part of the water. The water left in the mixture is driven off *in vacuo*. The fatty acids and crude glycerine are then distilled off together and the two separated in the distillate by sedimentation. O. Brucke. German Patent No. 728,638.

### Orange-seed Oil

California Valencia orange seeds contain a fairly high percentage of oil, the recovery of which by conventional methods of pressing appears to present no unusual problems. When refined, bleached and deodorized, the oil would be quite acceptable as a food oil. It contains a very small proportion of

linolenic acid but is otherwise similar to other seed oils of like iodine value. Its characteristics are: Refractive index at 25° C. 1.4686, Wijs iodine value 1017, saponification value 197.5, and unsaponifiable matter, 0.95 per cent. G. R. Van Atta and W. C. Dietrich. *Oil & Soap* 21, 19-22 (1944).

### Cleaning Vinyon

Neckties containing vinyon yarns have recently made their appearance and there is no reason to suppose that the use of this fiber will not extend to other textile products.

Vinyon is not attacked by acids or alkalis. It can be cleaned in Stoddard Solvent but is affected by the warm vapors of chlorinated solvents, so that cleaning in this type of solvent is not recommended. Vinyon dissolves or swells in acetone, ethyl and amyl acetates, chloroform, and toluene, but is unaffected by glacial acetic acid, methyl alcohol and ether. Vinyon material cannot be satisfactorily handled on steam presses or with hand irons without danger of partial damage due to the low melting point of the material. *Information Bull. Canadian Research Institute of Launderers and Cleaners*, Dec. 1943.

### Use of Refractive Index

A linear relationship exists between the composition and the refractive index of a mixture of methyl esters of fatty acids, which makes it possible to use the refractive index as a tool in the calculation of the composition of unknown mixtures. The determination is simple and may be made immediately on every fraction-cut in a distillation, thus providing information which can often simplify an analytical or preparative distillation. K. F. Mattil and H. E. Longenecker. *Oil & Soap* 21, 16-19 (1944).

### Revise Shellac Standard

A tentative draft of a revised federal specification for shellac (TTS-271a) is being distributed by the National Bureau of Standards. Comments from users on the new specification are invited. Copies are available through the Bureau of Standards.

### New Saddle Soap Spec.

A new federal specification for saddle soap (P-S-609) has just been approved by the Director of Procurement to become effective not later than March 1, 1944. General and detail requirements are as follows:

Saddle soap shall be a homogeneous paste consisting of soap, waxes, and oils in aqueous emulsion. The soap shall be of such quality that leather can be cleaned with it readily and thoroughly. When the soap is applied to a leather surface, permitted to dry, and rubbed with a soft cloth, the soap shall leave no greasy film, and shall cause no objectionable discoloration. The soap shall contain no added coloring matter. The odor of the soap shall be satisfactory to the purchaser. The soap shall be a non-flowing smooth paste over a temperature range of 5° C. to 38° C., with no separation of vehicle and in a proper form for application. *Chemical composition.* Shall be as follows.

	Percent
Matter volatile at 105° C. ....	Max. 76.0
Free alkali as sodium hydroxide .....	Max. 0.1
Free acid as oleic acid .....	Max. 0.3
Alkaline salts as sodium carbonate .....	Max. 0.1
Anhydrous soap .....	Min. 16.0
Unsaponified matter (free fatty oils and wax) .....	Max. 7.0
Unsaponifiable matter (from wax) .....	Min. 3.0
Matter insoluble in water ....	Max. 1.0
(Matter insoluble in water must be organic material)	

### New pH Indicator

A new acid-base indicator, ethyl-bis-2,4-dinitrophenylacetate, has been studied and described. The pH range over which the change from colorless to deep blue occurs is found to be from 7.5 to 9.1, making the indicator suitable for most titrations which are ordinarily performed with phenolphthalein. The indicator gives an accurate end point in amber-colored solutions where the phenolphthalein end point is not visible. It is therefore recommended for use in the determination of acid numbers and saponification equivalents of dark-colored oils. E. A. Gehnel and E. D. Amstutz. *Ind. Eng. Chem., Anal. Ed.* 16, 53-5 (1944).



# PRODUCTS AND PROCESSES

## Soap from Fatty Acids

Fatty acids are brought into contact with a soluble alkaline salt such as soda ash in the presence of a solvent such as water and an alcohol. The reaction is brought about in an enclosed vertical space. A foamy mass containing a liquid product and a generated gas is produced. Separation is caused by agitation, centrifuging, and shearing off of the foamy mass, removing the liquid portion from the lower part of the reaction space. S. J. Holuba, to Colgate-Palmolive-Peet Co. U. S. Patent No. 2,325,320.

## Dry-cleaning Solvent

Dry-cleaning solvent such as Stoddard solvent is made more effective for removal of water-soluble soil by the injection of substantially dry steam into the solvent in a quantity about 0.1 per cent of the volume of solvent. The steam is injected in such a finely divided condition as not to precipitate out on 12 hours' standing. D. L. Ebert, to Norris Products. U. S. Patent No. 2,324,917.

## Detergent from Hydrocarbon

Sulfonic derivatives of organic compounds, having washing and emulsifying properties, are prepared by treating a saturated aliphatic hydrocarbon, in the presence of light, with sulfur chloride. As an activating agent a labile inorganic nonmetallic element or compound is used which is capable of proceeding to a higher state of oxidation. Colgate-Palmolive-Peet Co. British Patent No. 548,276.

## Dish-washing Compound

A colored composition for cleansing and sterilizing dishes is made by introducing into an aqueous solution of trisodium phosphate and sodium hypochlorite an alkali metal permanganate. The proportions are such as to form a complex containing not more than 5 per cent of available chlorine. The complex is crystallized

from solution. H. H. Hull, to The Diversey Corp. U. S. Patent No. 2,324,302.

## Soaps Containing Polymers

Soaps which contain none or very little other fillers may contain water-soluble polymers, especially water-soluble polymers of acrylates and methacrylates. E. Trommsdorff, to Rohm & Haas G.m.b.H. German Patent No. 729,200; through *Chem. Abs.*

## Solid Rosin Soaps

Molten rosin is treated in an autoclave with steam and carbon dioxide and then saponified, in the same operation, with ammonia. The latter is taken in an amount insufficient to bring about complete saponification. This soap is especially suitable for paper. F. Arledter. German Patent No. 729,115; through *Chem. Abs.*

## Pad for Removing Oil

A hand-sized, semiquilted cloth pad containing an absorbent substance is sold under the name of "Flix" by the Waverly Petroleum Products Co. of Philadelphia, for the purpose of removing quickly all types of oils from the skin, leaving it clean and dry. A secondary use is indicated in the wiping of machines and machine parts preliminary to painting.

## Briquets for Water Softening

Briquets for softening water are produced by cooling and allowing to set in molds, a hot slurry containing sodium aluminate, ( $\text{Na}_2\text{O}$ ,  $\text{Al}_2\text{O}_3$ ) soda ash and trisodium phosphate, and insufficient water to hydrate the substances completely. The briquets are hard, and completely but slowly water soluble. J. M. Smith and Alfloc Ltd. British Patent 548,290.

## Nature of Bar Soap

Many bar soaps may be considered as made up solely of a crystalline phase without any apparent separation

of liquid crystalline or liquid phases. The crystalline phase is in the form of a solid solution of the various constituent soaps. This solid solution may exist in one or more of four crystalline modifications. R. H. Ferguson. *Oil & Soap* 21, 6-9 (1944).

## Soap as Antimist for Goggles

The enormous demand for protective goggles in war plants, as well as the ordinary use of glasses, creates a demand for an agent to prevent misting of the glass surfaces. In U. S. Patent 2,333,794, L. L. Jones describes material for polishing the glass and at the same time applying an anti-mist film. Tissue paper is impregnated with 0.5 per cent by weight of pure sodium stearate. The soap is distributed as a dry film over the paper carrier, from which it can be transferred to the glass of goggles or spectacles by rubbing and polishing in the usual way.

## Change Salt Water Soap Spec.

A new amendment to Federal Specification P-S-611a for Salt Water Soap has just been drafted by the Technical Committee on Detergents, Federal Specifications Executive Committee, to bring this federal specification into conformity with the provision of FDO-86 which specifies inclusion of minimum quantities of rosin and/or builders in various soap products. The principal changes are as follows. The soap is to be made from coconut oil fatty acids, rather than from coconut oil. It need not be "white" in color but merely "light." Minimum anhydrous soap content has been reduced from 40 to 38 per cent. Maximum per cent of rosin is set at 2 per cent, with glycerol at 0.8 per cent.

## Soybean-oil Determination

Experimental data emphasize the fact that the determination of oil in soybeans is empirical and that any analysis does not necessarily represent the total amount of liquids present in the sample. It is necessary to control moisture conditions under which seed is stored and under which it is analyzed if reproducible results are to be obtained. O. A. Krober and F. I. Collins. *Oil & Soap* 21, 1-5 (1944).

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# U.S.I. CHEMICAL NEWS

March



A Monthly Series for Chemists and Executives of the Solvents and Chemical Consuming Industries



1944

## Vital War Uses of Butyl Series Continue to Grow

Solvents, Plasticizers, Reagents Consumed on Big-Tonnage Scale

Consumption of butyl alcohol and its derivatives, long before the war, reached such proportions that no industrial chemist would hesitate to place them well up among the most widely useful products of the organic chemical industry. Nevertheless, war requirements have so accelerated the demand for these chemicals that even today's stepped-up production can do little more than keep pace.

Take a typical bomber, for example. Dibutyl phthalate serves as a plasticizer for the lining of its self-sealing gas tanks. Butyl acetate and butyl alcohol are used as solvents for the lacquers and dopes. Butyric acid helps make the plastics used at a dozen points.

### Indalone Manufacture

One dramatic example of a butyl compound at work is to be found in the new all-purpose insect repellent which is making such an important contribution to the comfort and safety of our armed forces. Here dibutyl oxalate is used in large quantities as a starting material in the synthesis of Indalone, one of the essential ingredients.

Butyl acetate continues to be used in increasing quantities for high-grade lacquers, where its excellent solvent power and slower evaporation rate are essential. Dibutyl phthalate is one of our most widely used plasticizers, being used with cellulose derivatives, plastics, synthetic resins, and synthetic rubber. Substantial quantities, too, are used for stabilizing smokeless powder.

Maintenance of maximum production of the butyl compounds is another one of the many examples of America's chemical ingenuity. For with the early cutting off of our West Indies molasses supply, it became urgently necessary to switch to new raw materials.

Official U. S. Navy Photo



U. S. Navy pilot and his Doughty Dive Bomber over Wake Island. His plane, his ammunition, his radio, his instruments . . . all have a butyl chemical somewhere in their background.



Courtesy Pan American World Airways

One pull and this air-borne life raft is quickly inflated from its "bottle" of liquid CO<sub>2</sub>.

## Diethyl Oxalate Suggests New Fields for Research

Supplementing an article on diethyl oxalate in the December 1943 issue of Chemical News, here are some further reactions suggestive of potentially valuable lines of research:

1. Diethyl oxalate reacts with PCl<sub>5</sub> to form dichloroethoxyacetoethyl ester. Heated in the presence of palladium black, this ester is decomposed into unaltered oxalate and oxalic ester chloride.

2. Alpha-pyrones, according to a recent patent, are capable of reducing the blood pressure of animals. The patent gives the synthesis of 5-methyl alpha-pyrone as typical:

Propionic aldehyde is condensed with malonic acid in the presence of pyridine to yield 2-pentenoic acid which is then esterified. The resulting ester is condensed with diethyl oxalate in the presence of potassium alcoholate to form the potassium salt of ethyl-4-methyl-5-carbomethoxy-5-hydroxy-2,4-pentadiene-1-oate. This is then hydrolyzed to the acid, which in turn is heated with acetic acid saturated with hydrogen bromide to form 5-methyl-6-carboxy-alpha-pyrone. The latter, heated with freshly-reduced copper, yields 5-methyl alpha pyrone.

3. If sodium triphenylmethyl is used as the condensing agent, diethyl oxalate reacts with

(Continued on next page)

## Drug and Vitamin Syntheses Hinge on Claisen Reactions

Sodium Ethoxide Finds Widening Utility as Condensing Agent

Although the Claisen type of condensation reaction has been known for many years, it is only comparatively recently that reactions of this type have come into their own in commercial-scale organic synthesis. With every passing month, however, it now becomes increasingly apparent that the Claisen Condensation is one of our most versatile reactions. One measure of the growing utility of this reaction is the increasing demand for sodium ethoxide to serve as the condensing agent.

The simplest "Claisen" is the reaction of 2 mols of ethyl acetate in the presence of sodium ethoxide, to form ethyl acetoacetate. In the production of atebrian, the side chain is formed by the condensation of ethyl acetoacetate with diethyl amino ethyl chloride, again using sodium ethoxide. In the synthesis of vitamin B<sub>12</sub>, two intermediates are formed by Claisen Condensations using sodium ethoxide: aceto-butyro lactone and sodium formyl beta-ethoxy ethyl propionate.

Still another example is the preparation of sulfadiazine. Here, large quantities of sodium ethoxide are used to condense ethyl formate with ethyl acetate to form the intermediate, ethyl sodium formyl acetate.

These are a few of the currently significant applications of sodium ethoxide. With the rapidly mounting interest in the production of complex synthetics, the list of uses for this U.S.I. product will doubtlessly multiply.

## Carotene Extracted from Sweet Potatoes

Recognizing sweet potatoes as an important potential source of carotene, or provitamin A, government researchers have been investigating possible methods of large-scale extraction. One of these methods, employing acetone, gave a product of 90 per cent purity in a yield of about 39 per cent.

The acetone extraction was carried out in four or five stages, the first two serving to dehydrate the potato pulp but absorbing little carotene. The third and fourth stages, in which a larger volume of acetone was used, extracted most of the carotene which was subsequently crystallized out.

## Retting Coconut Fibres Facilitated by Alcohol

Use of small quantities of ethanol to reduce the surface tension of alkaline retting baths serves to assure more uniform treatment of both fine and coarse coconut fibres, according to a French-owned patent now vested in the Alien Property Custodian. Shorter exposure of the fibres to the solution and consequent prevention of fibre degradation are cited as a further benefit.

The patent describes a cold retting process in which ethanol is added to the bath in the ratio of 5 parts to 10,000, and pH is maintained above 7.

## Butanol Used in Making New "Silicate" Lacquers

For all their valuable resistance to weathering and insolubility in solvents, infusible formaldehyde-urea resins do not come up to porcelain-type resins in hardness, water resistance, and adhesion to glass and ceramic surfaces. By incorporating a silicon compound that remains permanently in the resinous phase of these resins, however, an Ohio patentee finds he can combine the advantages of both types of coating.

The recently-granted patent covers a method of bringing ethyl silicate or ethyl orthosilicate together with water and an alkylated reaction product of formaldehyde and urea in a suitable solvent. In the example given, 25 parts of dimethylol urea dimethyl ether, 50 parts of *n*-butanol, 25 parts of ethyl orthosilicate, ¼ part maleic acid and 0.5 to 7.5 parts of water are warmed to 40 to 50 C to cause complete solution. The resulting lacquer gives a colorless, transparent, extremely hard and smooth coating when baked.

## Penicillin Extraction

The explanation for the current shortage of amyl acetate is to be found in the tremendously stepped-up penicillin program. This solvent has been selected as the most satisfactory for the extraction of the new "wonder" drug from the penicillin notatum mold.

## New Method Developed for Incorporating Vitamins

A process for incorporating Vitamins A and D into milk, tea, coffee, pharmaceuticals and other aqueous media is described in a recent patent. A fish-liver oil containing the vitamins is first saponified. The vitamins are extracted by a suitable solvent to form a concentrate from which constituents insoluble in methyl alcohol are removed at a temperature of -20 C. An ethyl alcohol solution of the concentrate is then mixed with the milk or other aqueous liquid to be vitaminized.

A second patent of interest to food and pharmaceutical manufacturers covers the preparation of a vehicle for vitamins such as A, B, C, D and G. It comprises the refluxing of ethyl alcohol for about an hour with a small proportion of gum tragacanth or gum arabic.

## New Fields for Research

(Continued from preceding page)

ethyl isobutyrate to form ethyl alpha-ethoxallysibutyrate in 61% yield.

4. Diethyl oxalate condenses with dicarboxylic esters in the presence of sodium:

(a) With ethyl adipate it gives a 50% yield of diethyl cyclohexane-2,3-dione-1,4-dicarboxylate. The by-products are triethyl cyclopentenetricarboxylate, triethyl cyclopentanotricarboxylate, and ethyl oxaladipate.

(b) With ethyl sebacate it gives triethyl 1-keto-1,2,9 - nonanetricarboxylate which upon distillation loses CO to form ethyl 1,1,8 - octanetricarboxylate, or upon heating with dilute HCl undergoes ketonic decomposition to form alpha-ketonoanedicarboxylic acid.

(c) With nonanedicarboxylic ester it gives triethyl 1-keto - 1,2,10 decanetricarboxylate which loses CO upon heating and gives ethyl 1,1,9 nonanetricarboxylate in 30% yield.

(d) With decanedicarboxylic ester it gives triethyl 1-keto - 1,2,11 undecanetricarboxylate which loses CO upon distillation to give ethyl 1,1,10 decanetricarboxylate in 30% yield.

5. Diethyl oxalate condenses in the presence of potassium ethylate with *o*-nitrotoluene to form ethyl *o*-nitrophenylpyrroacetate in 75-80% yields, and with *p*-nitrotoluene to form ethyl *p*-nitrophenylpyrroacetate in 50-60% yield.

6. Diethyl oxalate condenses with 1-phenyl-3-methyl-5-pyrazolone in the presence of potassium ethylate to give the potassium salt of ethyl 1-phenyl-3-methyl-5-pyrazolone-4-glyoxylate in 90% yield.

7. *O*-methyl cyclohexanone, reacted with diethyl oxalate in the presence of sodium and alcohol, acidified with sulfuric acid and distilled, gives methylcyclohexenoloxalacetone.

8. In the presence of AlCl<sub>3</sub>, diethyl oxalate condenses with tertiary aromatic amines.

(a) At low temperatures, the product is ethyl dialkylaminophenylglyoxylate.

(b) At higher temperatures, the product is ethyl tetraalkyldiaminophenylglycollate.

(c) At still higher temperatures, the product is ethyl hexaalkyltriaminotriphenylacetate.

These three products are quantitatively decomposed by H<sub>2</sub>SO<sub>4</sub> at 100-150° to give, respectively, esters of dialkylaminobenzoic acids, tetraalkyldiaminobenzophenones, and hexaalkyltriaminotriphenylcarbinols.

9. Diethyl oxalate condenses with tricarballic ester, giving triethyl diketopentane-ethylenetricarboxylate in 70% yield.

## TECHNICAL DEVELOPMENTS

Further information on these items may be obtained by writing to U.S.I.

**A new wetting agent**, said to possess penetrating and emulsifying properties comparable to oleic acid is offered for use in disinfectants and insecticides. Composed of fatty and rosin acids, the new agent is a by-product of the paper industry.

U S I (No. 790)

**Three new bonding adhesives** are being offered for use in joining aluminum, steel, and other metals, as well as ceramics and plastics. Bonds having two or three times the strength of usual riveted joints are said to be easily made. The first adhesive is designed to give maximum strength on materials which can stand baking at 350 F, the second for use at 250 F, the third at 150 F, or lower. (No. 791)

U S I

**Dampening Vibration** of pressure gages is the purpose of a compact new throttling device claimed to facilitate reading and prolong the life of gages connected to pulsating air, water, steam, and oil lines. Particularly valuable with reciprocating pumps and compressors. Helps keep gages in calibration.

U S I (No. 792)

**A new corrosion-proofing product**, applied by dip, spray or brush, is reported to dry to a hard, glossy finish in 45 minutes and to be suitable for use in temperatures up to 400 F. Used to protect metals from a wide range of acids and chemicals. Firm also offers heavy, brush-applied product for wood or concrete floors, drains, etc. (No. 793)

U S I

**A non-wetting coating** can be applied to ceramics by a newly-developed chemical whose vapors react at the surface to form a submicroscopic, non-volatile film. Products also has potential applications in paper, glass and other fields. (No. 794)

U S I

**Two new organic phosphorous compounds**, thought to have potential uses as lubricating oil additives, soap preservatives, anti-oxidants, fire retardants, and plasticizers have been developed experimentally.

U S I (No. 795)

**For curing paint**, and similar processes which can be accelerated by application of infra-red rays, a manufacturer has developed gas burners from which practically all radiation is in the form of infra-red rays.

U S I (No. 796)

**A new water-proofing material**, applied to fabric by dip, is reported to have little effect on tensile strength, and produce no unpleasant odor during processing.

U S I (No. 797)

**Skin protective creams**, of four types specially formulated to meet specific industrial conditions, are offered in pH's ranging from 6.2 to 7.6.

(No. 798)

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Specially Denatured—all regular and anhydrous formulas  
Completely Denatured—all regular and anhydrous formulas  
Pure—190 proof, C.P. 96%, Absolute

Super Pyro Anti-freeze  
Solox Proprietary Solvent

### ANSOLS

Ansol M  
Ansol PR

### ACETIC ESTERS

Amyl Acetate  
Butyl Acetate  
Ethyl Acetate

### OXALIC ESTERS

Dibutyl Oxalate  
Diethyl Oxalate

### PHTHALIC ESTERS

Diamyl Phthalate  
Dibutyl Phthalate  
Diethyl Phthalate

### OTHER ESTERS

Diatol  
Diethyl Carbonate  
Ethyl Chloroformate  
Ethyl Formate

### INTERMEDIATES

Acetoacetanilide  
Acetoacet-ortho-aniside  
Acetoacet-ortho-chloranilide  
Acetoacet-ortho-toluidide  
Acetoacet-para-chloranilide  
Ethyl Acetoacetate  
Ethyl Benzoylacetate  
Ethyl Sodium Oxalacetate

### ETHERS

Ethyl Ether  
Ethyl Ether Absolute—A.C.S.

### RESINS

Natural  
Synthetic

### ACETONE

Chemically Pure

### FEED CONCENTRATES

Curbay B-G  
Curbay Special Liquid  
Vacatone 40

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Ethylene  
Ethylene Glycol  
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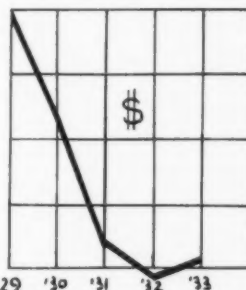
# REMEMBER?

## 10 YEARS AGO



SOAPERS WERE VIGOROUSLY PROTESTING EXCISE TAX ON COCONUT OIL WHICH CONGRESS WAS CONSIDERING

F.H. MERRILL OF L.A. SOAP CO., WAS ELECTED PRESIDENT OF PACIFIC COAST SOAP MFRS. ASSOCIATION



SOAP COMPANY REPORTS FOR 1933 SHOWED PROFITS EDGING UP FROM THE LOW POINTS OF 1932



CPP OFFICIALLY MOVED MAIN OFFICE FROM CHICAGO TO JERSEY CITY

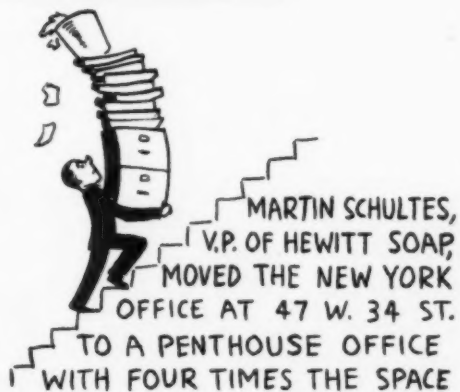


NEW \$75,000 ADDITION OF ANDREW JERGENS CO., CINCINNATI SOAP PLANT, WAS READY TO GO INTO PRODUCTION

BENJ. ALEXANDER, PRES., EAGLE SOAP CO., CHICAGO, RETIRED



SIX NEW SOAP PLANTS WERE PLANNED UNDER USSR'S SECOND FIVE YEAR PLAN



MARTIN SCHULTES, V.P. OF HEWITT SOAP, MOVED THE NEW YORK OFFICE AT 47 W. 34 ST. TO A PENTHOUSE OFFICE WITH FOUR TIMES THE SPACE

MARKET REPORT  
COCONUT OIL IN TANKS, PACIFIC COAST, 2½ + LB.

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# OLEIC ACID

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REFINED TALLOW  
FATTY ACIDS

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## RAW MATERIALS FOR THE SOAP INDUSTRY

### FATTY ACID SUBSTITUTES FOR COCONUT OIL

Mixtures of Vegetable oil fatty acids to replace coconut and other high-glycerine content oils now unavailable to many soap makers. It will pay you to investigate these replacement materials at once. Write for samples and prices.

Castor Oil  
Cora Oil  
Cottonseed Oil  
Olive Oil

Olive Oil Feets  
Peanut Oil  
Rapeseed Oil  
Sesame Oil

Soya Bean Oil  
Fatty Acids  
Lard Oil  
Neatsfoot Oil

Oleo Stearine  
Stearic Acid  
White Olein  
Tallow

Grease  
Lanolin  
Caustic Soda  
Soda Ash

Borax  
Caustic Potash  
Carbonate Potash  
Sai Soda

Boric Acid  
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Silicate Soda  
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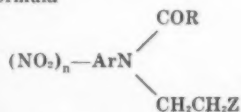


## Conducted by

Lancaster, Allwine &  
RommelRegistered Attorneys  
PATENT AND TRADE MARK CAUSES402 Bowen Building,  
Washington, D. C.

Complete copies of any patents or trade-mark registration reported below may be obtained by sending 25c for each copy desired to Lancaster, Allwine & Rommel. Any inquiries relating to Patent or Trade-Mark Law will also be freely answered by these attorneys.

No. 2,338,380, Insecticidal Composition, patented January 4, 1944, by William F. Hester, Drexel Hill, and W. E. Craig, Philadelphia, assignors to Rohm & Haas Co., Philadelphia. An insecticidal composition containing as an active principle a compound of the formula



wherein Ar is an aryl nucleus selected from a member of the benzene and naphthalene series, Z is a member of the class consisting of —OH, —OR, and —OCOR groups, and  $n$  is an integer having a value from one to two inclusive, R being a hydrocarbon group selected from the aliphatic, aromatic, and alicyclic series.

No. 2,338,688, Cleaning Composition, patented January 4, 1944, by Milton E. Parker, Chicago, and Paul W. Bonewitz, Burlington, Iowa, assignors to The Rex Co., Burlington, Iowa. An acid cleaning composition for chemically reacting with and releasing calcareous films including calcium and magnesium and calcareous films including protein and fat, which films are adhered to metal surfaces such as dairy equipment by the cementitious action of the calcareous constituents, the cleaner comprising an organic acid selected from the group consisting of levulinic, gluconic, and hydroxyacetic acids and mixtures of the same, which acids are substantially non-toxic, and a wetting agent compatible with the acid and chemically non-reactive therewith, the cleaning composition in aqueous solu-

tion penetrating the films and reacting with their calcareous constituents to solubilize the same whereby to release and loosen the adherent films, the acid cleaning composition being substantially non-reactive with the metal surfaces of the dairy equipment, and the organic acid constituting the sole effective acid cleaning agent in the composition.

No. 2,338,987, Preparation of Nitrogen-Phosphoric Acid Compounds for Water Softening, patented January 11, 1944, by Rudolf Watzel, Mannheim, Germany; vested in the Alien Property Custodian. The process of making a compound for water-softening and the like, comprising heating to between 120° and 200° C. at atmospheric pressure and until reaction ceases, substantially equimolecular quantities of a polymeric phosphoric acid and a nitrogen compound selected from the group consisting of urea, acetonitrile and urethane.

No. 2,339,050, Improving the Odor of Thiocyanate Insecticides, patented January 11, 1944, by William F. Carson, Jr., Brunswick, Ga., assignor to Hercules Powder Co., Wilmington, Del. A process for improving the odor and reducing the irritation effect of organic thiocyanates which comprises subjecting a phase containing an organic thiocyanate having an odorous and irritation producing compound associated therewith to the action of a dilute aqueous solution containing an organic compound basic in reaction and having a trivalent nitrogen atom, at least one valence of which is connected directly to a carbon atom, the solution being capable of substantial immiscibility with the phase and having a modifying action upon the odorous and irritation producing compound whereby there results a thiocyanate containing phase of reduced content of odorous and irritation producing compound and a second phase, and separating the two phases.

No. 2,339,096, Solvent Composition and Method of Cleaning Lubricated Apparatus, patented January 11, 1944, by John D. Morgan, South Orange, N. J., assignor to Cities Service Oil Co., New York. The method of loosening and removing resins and carbonaceous residues from the valves and pistons of an internal combustion motor, which comprises introducing into the cylinders of the motor a solvent mixture comprising approximately 15 per cent of kerosene, 15 per cent of xylene, 15 per cent of

secondary butyl alcohol, 50 per cent of light mineral lubricating oil and from 1 to 5 per cent of a condensation reaction product of tricresyl phosphite and sulfur, the percentages being by volume.

No. 2,339,330, Preparing Anhydrous Hydrogen Halides, patented January 18, 1944, by Arthur Ira Gebhart, Union, N. J., assignor to Colgate-Palmolive-Peet Co., Jersey City, N. J. The process of preparing substantially anhydrous hydrogen halide in liquid sulphur dioxide which comprises contacting a halogen, water and liquid sulphur dioxide, the liquid sulphur dioxide being in excess of the stoichiometric amount required.

No. 2,339, Divisible Soap Bar, patented January 25, 1944, by James E. Egan, West New Brighton, N. Y., assignor to The Procter & Gamble Co., Cincinnati. A method of making a bar of soap of a type which may readily be broken in two, comprising perforating the bar to a substantial depth with a plurality of perforations aligned across the smaller dimension of the face of the bar about midway of its length, and thereafter stamping the bar into final bar form, employing sufficient pressure in the stamping operation to collapse the perforations effectively.

## Royal Navy Salt Soap

With the stated aim of conserving fresh water abroad ship at sea, the Royal Navy has developed a salt-water soap for cleaning purposes, it was reported recently in a naval order tabled in the Canadian House of Commons. The order, it is reported, did not go into detail regarding the development, properties and characteristics of the new soap.

## New Seed Oil

The oil from a sample of seeds from North Travancore had the constants:  $d_{40}$  0.9251,  $n_{D20}$  1.4694, acid value nil, saponification number 198.9, iodine number 92.9, and unsaponifiable 0.81 per cent. The oil consists of olein 27 per cent, linolein 3, palmitin 14, and stearin 56 per cent. N. S. Varier. *Proc. Indian Acad. Sci.* 17A, 195-8 (1943); through *Chem. Abs.*

## Perfume Stabilizer

Perfumes to be used in toilet or laundry soaps are stabilized by adding ascorbic acid to inhibit oxidation. C. N. Andersen, to Lever Bros. Co. U. S. Patent No. 2,324,348.

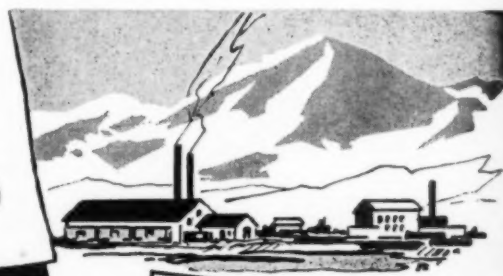
# HERE'S A RAW MATERIAL YOU Can GET! NUBRO RESIN

Here's a wood resin that's not only plentiful but low in cost, CLEAN and UNIFORM as well. It has to be, because of the way it's made . . . by modern steam distillation methods . . . under scientific laboratory control. All foreign matter is left behind. All shipments are identical, with never a need of change in your formulae.

NUBRO RESIN has a rosin color grade of "B", a melting point of 53°C (capillary tube) and 76°C (ball and ring), with an acid number of 107.

It is used as an emulsifier in disinfectants. Nubro soap will not salt out of solution and form scum in the presence of large excess of alkali. It is soluble in alcohol, ketones, aromatic hydrocarbons, toluol xylol, etc., and terpene solvents. It will saponify readily with caustic soda, soda ash, caustic potash and potash.

Available in carload quantities for immediate shipment.



Not until Valencia — the standard of American Pumice — was discovered at Grants, New Mexico, was it thought that a domestic pumice could match the quality of imported Italian Pumice. This inexhaustible deposit at Grants is true pumice stone and not a volcanic ash. It is physically and chemically equal in every respect to the now unobtainable Italian Pumice. • The Valencia plant's output of grades for every need is rigidly under control for particle size, purity, weight and color.

Check this table comparing Valencia with the highest grade of imported Italian Pumice. See for yourself that Valencia is truly the standard of American Pumice.

	American Pulverized Per Cent	Italian Select Per Cent
Silica	72.90	73.24
Alumina	11.28	10.61
Iron Oxide	.86	1.57
Titanium Oxide	.06	.10
Calcium Oxide	.80	1.10
Magnesium Oxide	.36	.40
Soda	3.64	3.03
Potash	4.38	5.58
Sulphuric Anhydride	.03	.05
Loss on ignition	5.20	4.04

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# EQUIPMENT AND BULLETINS

IF YOU want additional information on any of the items described below or if you want any of the bulletins, catalogs, etc., write to the MacNair-Dorland Co., Inc., 254 West 31st St., New York 1, mentioning the number of the item.

## 991—Pilot Plant Booklet

Blaw-Knox Co., manufacturers of machinery and steel products, Pittsburgh, are distributing a new bulletin, Catalog 1957, entitled "Blaw-Knox Pilot Plants for Chemical Development." The catalog is a 24-page booklet that fully illustrates and describes pilot plants developed and constructed by the company for various manufacturing processes. The six steps in the evolution of a chemical plant are described and discussed, with special attention to "Step 5," pilot plant studies. Copies are available on request to those whose business connections entitle them to them.

## 992—Booklet on Grubs

Grubs, their estimated annual damage to livestock, and ways to control them are outlined and illustrated in an eight-page folder issued by Ray L. Cuff, southwestern regional manager of the National Livestock Loss Prevention Board, Live Stock Exchange Building, Kansas City, Mo. Estimating the loss to the livestock industry at \$100,000,000 annually, according to the U. S. Department of Agriculture, the booklet's introduction states that 3½ cents worth of derris powder may prevent a grub dock (loss) of \$3.50 per head. The life cycle of the grub, the time to treat them, the derris treatment, dusting, spraying, washing and dipping are all covered in the pamphlet.

## 993—Precision Measurement

"Quality Control," a new pocket size handbook on scientific inspection, has just been released by Continental Machines, Inc., 1301 Washington Ave. South, Minneapolis 4,

manufacturers of DoAll gages and gage instruments. The 64-page hand book briefly explains the subject of precision measurement, using a number of photographs, diagrams, charts and tables to explain scientific inspection. Gage blocks, and gage instruments and accessories are described, including presentation of the new mobile inspection unit which brings the inspection department right to the point of work. Copies are available on request.

## 994—Blackmer Pump Co. Paper

The "Blackmer Swinging Vane," house magazine of Blackmer Pump Co., Grand Rapids, Mich., in its Jan.-Feb. number, just issued, discusses "'Cast Iron' for Pumps," an article based on reports of the Hydraulic Institute. An engineering table for users of rotary pumps, the story of the "Southeastern Pipe Line" and "Shipboard Maintenance of Rotary Pumps" by E. W. Chapman, chief engineer of Blackmer Pump Co. are other features included in the latest issue of the magazine.

## 995—Organic Iodine Compounds

A review of the literature and patents covering organic iodine compounds tested against insects, fungi and bacteria, compiled by C. Verne Bowen, of the U. S. Department of Agriculture, Agricultural Research Administration, Bureau of Entomology and Plant Quarantine, has just been published by the Iodine Educational Bureau, Inc., 120 Broadway, New York 5. In the booklet's introduction it is pointed out that the current shortage of certain raw materials for insecticides might be somewhat alleviated by the manufacture of synthetic iodine compounds that have insecticidal value. It further points out that of the 294 organic iodine compounds that are included in this publication, 112 were tested for fungicidal or insecticidal action, while the remainder

were tested only for action against bacteria. The compounds listed are named and arranged according to the scheme used in *Chemical Abstracts*. The name by which the compound is designated in the reference has been retained as a synonym where it differs from the Chemical Abstract name. The patent references are listed separately by number.

## Army Advances Asp

Stanley Asp, on leave of absence as research chemist for Filtrol Corp., Los Angeles, manufacturers of adsorbents for the purification of oils, fats and solvents, has been advanced in rank from captaincy to major in the Engineers Base Headquarters Company by the U. S. Army. He is now serving in the European theatre.

## DFC To Wrisley Employee

The Distinguished Flying Cross was recently awarded to Tech. Sgt. Dave Altshuler, former employee of Allen B. Wrisley Co., Chicago, for participation in the raid on the Ploesti oil refineries in Rumania.

## Philipp Bros. Open Two Offices

Philipp Bros., Inc., New York chemical house, opened two new branch offices, one at 325 W. Pratt St., Baltimore, under the direction of Fred S. Mueller, the other at 34 North Front St., Philadelphia, headed by W. J. Nolan, it was announced late last month. Mr. Mueller, who has been in the chemical industries for fifteen years, spent his entire career in chemical sales in the Baltimore and nearby territories. Mr. Nolan, prior to his appointment, directed the W. J. Nolan Co. Philipp Bros. now has five branch offices and carries warehouse stock at Hartford, Providence and Boston, in addition to New York.

## C-P-P Man Joins Agency

Thomas G. McReynolds, formerly of the advertising and sales department of Colgate-Palmolive-Peet Co., Jersey City, N. J., has been appointed an account executive by the advertising agency of Young & Rubicam, Toronto.



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**THE REFINED**  
**TALL OIL**  
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### Shoe-polish Waxes

The waxes in shoe polish are necessary for the covering and preservative properties, as well as for waterproofing. One of the waxes at least must possess a capacity to "polish." War-time shortages have in general resulted in poorer polishes.

Examples of compositions containing both solvent and water are the following:

I	
	Parts by weight
Beeswax	16
Ceresin wax	16
Carnauba wax	6
Turpentine	52
Soda soap	6
Oil-soluble dye	to suit
Water	to suit
II	
Stearic acid	10
Linseed oil	5
Turpentine	30
Soap flakes	5
Water	50
Pigment	to suit

Polishes which are virtually solutions of waxes in inorganic solvents are illustrated by these formulas:

I	
	Parts by weight
Carnauba wax	6.5
Crude montan wax	4
Oil-soluble dye	3
Paraffin wax	11
Ozokerite	1
Turpentine	74.5
II	
Montan wax	15
Paraffin wax	10
Beeswax	4
Japan wax	4
Wax-soluble dye	3
Turpentine	64

A number of substitutions to meet war-time supply conditions can be made. Assuming that paraffin and probably beeswax and shellac wax are available, the use of the highest melting paraffin wax obtainable is advised. Some beeswax should be used because it gives smoothness and facilitates application and polishing.

To replace the polishing waxes such as carnauba, candelilla and montan, shellac wax or a synthetic wax resembling carnauba should be used. In black polishes, however, bitumen will serve reasonably well. A blown petroleum bitumen of ball and ring melting point of 80-90° C. or above, mixes quite well with paraffin and can be polished. Even better are the special hard, rather brittle bitumens, such as gilsonite, which can be used in lesser

quantities. Again, ordinary colophony resin or other similar resin judiciously incorporated with paraffin is helpful.

Mention has not been made of the chlorinated naphthalene waxes because many prospective users dislike the dermatitis regulations and precautions. If these are used, it is possible to use the higher-melting, less refined grades. *The Industrial Chemist* 20, 31-5 (1944).

### Fungicidal Substance

A crystalline metabolic product has been isolated from cultures of *Penicillium patulum* Bainier, named patulin and identified as anhydro-3-hydroxy - methylene - tetrahydro - 1:4 - pyrone - 2 - carboxylic acid. This substance has been shown to be a powerful anti-bacterial agent, completely inhibiting the growth of both Gram-positive and Gram-negative bacteria at concentrations of 1:50,000 to 1:100,000. Patulin is also formed by a number of different strains of *Penicillium expansum*, isolated from mouldy apples, pears and grapes. Patulin is a powerful fungicidal agent since it completely suppresses the growth of a number of species of *Pythium* at a concentration of 1:400,000 to 1:500,000. W. K. Anslow, H. Raistrick and G. Smith. *J. Soc. Chem. Ind.* 62, 236-8 (1943).

### Water-Testing Set

A new water testing set, developed by W. H. and L. D. Betz, of Gillingham and Worth Streets, Philadelphia, is said to include all of the necessary apparatus and chemicals for the determination of water hardness, alkalinity, chloride, sulfite, and phosphate. Although it is offered primarily for the analysis and control of boiler water, it will probably be found useful in any industry where the purity of process- or product-water is important.

All chemicals and apparatus are housed in a special dustproof cabinet, ready for instant use. The cabinet may be set on a table or hung on a wall. A fluorescent light built in furnishes illumination for tests; a part of the cabinet door swings down to form an acid-resistant working space.

### Describes "Dream Soap"

Last month an item headed "Skin Protective Creams" was run in *Soap*, which listed desired characteristics in skin protective creams. Publication of this item so incensed one of our readers that he has written a vehement protest against (1) describing items of this type without completely clarifying the point; (2) offering only accomplished facts and reasonable goals—the writer says that the "best skin protective creams and lotions are not completely satisfactory . . . their efficiency is (perhaps) as low as 50 per cent in resisting common industrial irritants." The writer further feels that "the protective cream is described ambiguously, perhaps leading the reader to assume that such a cream exists or is manufactured."

The writer then retaliates by setting up the following qualities he feels the "ideal type of soap" should have:

(1) It should remove tar, printer's ink, dyes, gum, and paint readily by the use of hot water and gentle rubbing.

(2) It should contain a skin conditioner that will restore a baby-like texture to the skin of all users. It should also impart a nice pink glow and firm texture to the flesh.

(3) It should remove body odor and act as a repressive to perspiration without sealing the "horn" cells, leaving them free to function normally.

(4) It should cool the skin, being ideal for use on the feet both before and after dancing.

(5) It should have qualities of the best surgical antiseptic solution, destroying all germs of all types upon immediate contact; and it should, in addition, heal all skin irritations and dermatoses, such as impetigo, tetter, eczema and athlete's foot."

### Molasses Glycerin Uneconomic

The manufacture of glycerine from molasses by a fermentation process has been abandoned by National Chemical Products, Ltd., of South Africa, according to the U. S. Dept. of Commerce magazine *Foreign Commerce Weekly*, which bases its story on the annual report of the company. Although glycerine of high quality, suitable for making dynamite, was produced, the process proved uneconomic, it is reported. The yield was lower than had been estimated and filtration was a difficult technical problem.

## SHAVE PRODUCTS

(From Page 26)

may account for shortages in civilian stores in some sections of the United States. Another factor causing shortages is the container situation, to say nothing of raw materials and labor shortages. The Army quartermaster purchases all supplies of such items as shaving preparations for sale in canteens and post exchanges overseas. Post exchanges in the continental United States have autonomous purchasing power. The Navy, on the other hand, purchases for its ship stores, both land based and on ships entering ports in the particular naval district, through its district purchasing headquarters. There are no Army or Navy shaving cream specifications; the shaving preparations being bought by brand name. The army does issue some unbranded shaving preparations as part of a toiletries kit for use under battle conditions, but even in combat areas there are mobile canteens from which are sold the nationally advertised brands of shaving preparations, etc.

Great Britain has an organization similar to our post exchange that is known as the NAAFI, Navy, Army, Air Force Institute, that sells commercially known products at full price. Outside of Great Britain, these products sell at full price plus cost of transportation. The American products are sold by post exchanges at prices usually less than normal retail prices. As a result in those places where British personnel have access to U. S. post exchanges they buy our American products at a considerable saving. However, as a foreign sampling market for American products, this is a valuable testing group for American manufacturers, and one that is believed to have real post-war possibilities. It might be added in fairness that the profits from NAAFI go to organizations comparable to our Army and Navy Relief Societies.

The stock pile of goods for service men said to be building up overseas will take a large share of our production of shaving preparations for the

remainder of this year, but after that it should begin to taper off. The stock pile has been building since last year, according to reports. However, a large portion of our shaving preparation will continue to go to the armed forces since it is estimated that about 40 per cent of all shavers will be in the armed services by the middle of the year.

OVER the past year or more there has been, wherever possible, a change over in packaging to glass, and similar materials. Tubes have been scarce and paper is one of the most critical of all materials. The shortage of packaging materials is one of the brakes on a larger production and volume of sales of shaving preparations. Manufacturers are now using lead tubes for shaving creams, which are not under allocation, but are difficult to obtain. There is some talk that aluminum for tubes may be available shortly.

The glass picture is not bright. Since there is a definite shortage of labor in this industry and since it will be absolutely necessary to rebuild furnaces that have not been built in two years or more, a drop in glass production is freely predicted for 1944. Paper, as everyone knows, is said to be one of the most acutely short materials in the war picture. Sizeable cuts in paper use have been ordered and will drastically revise present packaging methods. As steel is eased as a packaging material, it is hoped that the pressure on paper packaging material will be relieved sufficiently to avoid undue hardship.

Although manufacturers will not admit to having any particular new shaving products ready now for the glamorous post war period, a new advertising note has crept in recently that may alter to some degree the future course of promoting shaving products. The headline on this advertisement, appearing in the Saturday Evening Post and other national magazines recently, of Lambert Pharmacal Co., St. Louis, makers of Listerine shaving and brushless shaving creams,

read: "Aren't you curious about the shaving cream guaranteed not to make shaving a pleasure?" After this startling question the copy goes on to assert: "Dear Sir—Your face has probably been a testing laboratory for a lot of shaving theories, tools, soaps and creams, lotions and salves. Yet, in the fullness of time and experience, each man learns that shaving is, at best, a nuisance and a bore. And that even when it is not downright painful, the word pleasure should not be mentioned in the same breath with shaving. . . ." This is frank talk coming from a shaving preparation manufacturer. Who knows perhaps it will usher in an entire new advertising approach to shaving creams. Or, is it, at best, like so many others, merely a "war measure?" At any rate the future of the sale of shaving creams is still bright despite the introduction of the electric or so-called dry shaver, which all manufacturers of shaving creams seem to minimize as a threat to the sale of shaving creams, soaps, lotions, salves, etc.

## Rosin Consumption Up

The Naval Stores Research Division has just issued a quarterly report on production, distribution, consumption and stocks of naval stores for the three month period, October through December, 1943. Total consumption of gum and wood rosin during this 1943 period was 629,908 barrels (500 lbs. gross) as compared with only 274,512 barrels in the same quarter of 1942. Stocks have been cut down rather sharply and stood at only 1,216,789 barrels on December 31, 1943, as compared with 1,843,827 barrels at the end of 1942. The report indicates that soap makers used 109,080 barrels of rosin during the final quarter of 1943, as against 72,693 barrels during the corresponding quarter of 1942. Manufacturers of shoe polish and other shoe preparations took 3,130 barrels of rosin in the fourth quarter of 1943 as against 1,810 in the same quarter of 1942. Manufacturers of insecticides and disinfectants consumed 1,560 barrels of rosin in the fourth 1943 quarter as against 1,260 in the same 1942 quarter.



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SEALS WITH STANDARD SCREW CAP

**WILL PRE-WAR PACKAGES GET POST-WAR SALES?**





# INSIDE NEWS

MARCH

PREPARED BY NATIONAL CAN CORPORATION, NEW YORK, N. Y.

1944

## Are You Going To Package Your Product In Electrolytic Tin?

There is evidence that war-time cans, tin-coated by electrolysis for a 67% tin saving, will be used to package certain non-processed and non-corrosive products after the war.

How many products will be able to be packaged in electrolytic plate, however, depends on the cost and efficiency of the weight of electro-tin coating required, when compared to the cost and efficiency of hot-dipped plate.

Research for tin conservation was being carried on by can manufacturers long before Pearl Harbor. When 92% of our tin fell into Japanese hands, research was accelerated; a committee for tin conservation was set up by the Can Manufacturers Institute; and tin plate made by electro-deposition became the foundation of the present supply of tin cans for essential needs.

The efficiency of electrolytic tin has been carefully analyzed for packaging many individual food products, in relation to the electrolyte employed, the enameling required for corrosion-resistance, vacuum-persistence and relative costs of plain electrolytic and hot-dipped plates, melted and unmelted. Conclusions are by no means final today, but results and tables relating to specific products are available on request.

In general, the earlier disadvantages of inside-enamelled electrolytic plate have been partially overcome by suppliers in developing processes to melt the tin coating. The results have been apparent in better corrosion resistance, solderability and appearance.

Testing for corrosion-resistance and vacuum-persistence of tin cans is a painstaking process, involving many variables. The most common technique is to test hot-dipped tin cans against plain, melted, brushed and chemically-treated electrolytic tin, with various weights of coatings, on similar and dissimilar steels, at different temperatures and containing different products, throughout various storage periods. In addition, exacting tests have been made of the performance of enameled electrolytic ends and enameled bonderized steel ends on the various electrolytic and hot-dipped bodies.

Tests are based on the fact that corrosion creates hydrogen which gradually dissipates the vacuum in the container. A "flip vacuum" testing device is used to apply external vacuum to the end of the can; the amount of external vacuum required to flip open the end measures the amount of hydrogen, and hence the degree of corrosion, that has taken place.

Perhaps the most interesting test-result to be considered in choosing a container for the immediate future is the good behavior of tin cans with enameled electrolytic ends on plain, hot-dipped bodies, when containing acid fruits such as cherries, peaches and apricots. Good results are attributed to the presence of stannous ion in the cor-

roding medium, retarding the attack on the steel of tin plate.

Since this combination saves approximately 50% more tin, and performance tests are encouraging, experimental packs are being tried this year, with enameled electrolytic ends and plain, hot-dipped bodies. Next year, such containers may be used on a large scale for some fruit products.

All in all, the efforts made to overcome the war-caused tin shortage have resulted in progress which, as in the case of much wartime research, will bring cost-savings and better values to post-war users of tin containers; in addition to the well-known packaging advantages of safe, economical, vacuum-preserving, tin-coated steel. 579

### Tin-Nickel Cans

Metal cans thinly coated with tin on top of nickel may be a suitable replacement for heavier coated tin cans, laboratory tests indicate. Five canned foodstuffs were used to test the nickel-tin coating, these being dried prunes in sirup, sauerkraut, tomatoes, spinach and peas—selected as typical of the corrosive conditions encountered in tin cans.

For these tests the nickel-tin coatings were obtained by plating first the nickel and then an equal thickness of tin, and heating at 575 deg. F. for six to eight minutes. A suitable coating thickness has been determined. 580

### Apple Ethylene

When apples of different degrees of ripeness are stored together, ethylene given off by the ripe ones accelerates the ripening rate of the others. However, there is no effect by one lot on another when both lots are at the same stage of ripeness. This effect is important, because as much as 50 per cent of the storage life of the less-ripe fruit may be lost, an average of 25 per cent loss being found in a series of tests. 581

### "Boraxed" Spinach

More rapid growth in increased yields of spinach were obtained by the application of borax on boron-deficient soils in a southern state according to tests made recently. There was one drawback to the effect of boron applications, so far as spring sown spinach is concerned, however. It was found that very rapid growth was induced and that seed-stalks formed early. Early seed-stalk formation is not desirable because of the need for careful timing of the harvest. This character is less likely to be troublesome in fall-planted spinach. A publication telling the rates of application and showing the location of boron deficient soils in the test state is available. 582

### Salt-Brine Peeler

One canner with a continuous dehydrating unit has developed a salt-brine peeler for potatoes which he claims is giving exceptionally fine results in the finished product. Salt-brine peeling is an innovation and differs from both lye peeling and steam peeling, although the equipment used is virtually the same as for lye peeling. Potatoes, after rough washing, are passed through a saturated salt-brine solution at 228 degrees F. for about six minutes. The skins are loosened sufficiently so that pressure sprays remove virtually all the peel and the remainder, with the eyes, are taken off at the trimming table. The canner believes the salt treatment aids materially in turning out a good-colored product. Whether because the salt halts enzyme action prior to blanching, or because of the speed with which the product is handled, it is a fact that the dehydrated potatoes coming off this canner's line are exceptionally white and free from the yellowing that gives trouble to some other processors. 583

### Milk! More Milk!!

In periods of increased demand for milk, dairy herds may be induced to step up the volume of production within a relatively short time by heavier feeding of the cows without danger to the animals. This fact was reported following tests made in Pennsylvania on a mixed herd of 22 Brown Swiss and Holsteins. Dairywomen usually feed not more than one pound of grain for three pounds of milk produced daily by the cow. It was found in the feeding tests that this ratio could be increased to one pound of grain for each 1.75 pounds of milk before the law of diminishing returns took effect to raise feed costs above the average per pound of milk yielded. 584

### Rehydrated Foods

The palatability and color of rehydrated, cooked dehydrated foods is affected considerably by the time of soaking before cooking, and retention of vitamin C is affected by the same factor, according to results of recent laboratory tests. Experiments with dehydrated potatoes, rutabagas, cabbage, beets and turnips showed that very weak flavor and poor color resulted from soaking for longer than an hour, and that half-hour soaking was about the limit before changes began to be noticeable.

It was reported that Vitamin C was lost in direct ratio to the time of soaking. The type of packaging appeared to have little effect on the final results.

Storage conditions had little effect on the palatability of dehydrated beets, but was found to have a marked effect on the palatability of cooked, unblanched dehydrated cabbage. A full account of the experiments, with comments on flavor, color and Vitamin C retention, is available. 585



PLANTS: NEW YORK · BOSTON · BALTIMORE · CHICAGO · HAMILTON, OHIO · FORT WAYNE, INDIANA

## Fuel Tanks

Specially-formed tanks are now being used on British aircraft as auxiliary fuel containers. Known as jettison tanks, since they can be discarded when necessary, the tanks enable the planes to carry extra gasoline for long-range activity. The tanks are formed from a particular combination having weight and leak-prevention qualities.

586

## Pigments—Acid Reaction

Recent new data on the changes that take place in the color and ascorbic acid content during storage of deaerated and pasteurized juices from highly pigmented small fruits indicate the possibility that a reaction occurs between the pigments and the ascorbic acid. This would explain the loss of color in the juice and the decrease in ascorbic acid content. It has been found that increasing the concentration of ascorbic acid or its isomer increases the rate of change of color as well as the rate of vitamin loss.

587

## Enamel Required

Recent tests indicate that No. 1 oval cans manufactured from 1.25 hot dipped plate are not satisfactory for use in packing pilchards in tomato sauce for the War Food Administration, unless the cans are inside enameled. So the canning industry has been requested to use inside enameled oval can bodies on all deliveries of canned pilchards to the Federal Surplus Commodities Corp. as soon as the cans are obtained.

588

## Fat-Oil Stabilizers

Fats and oils may be stabilized by the addition of several different substances, according to a series of patents recently issued. One patent covers the addition of a small amount of ascorbic acid and of small amounts of tocopherol-type compound. A second patent specifies the addition of small quantities of naphthols, quinones or quinol compounds; a small amount of ascorbic acid; and a small amount of a vitamin E precursor compound. A third patent covers the use of a small amount of caffeic acid, and a fourth, small amounts of hexuronic acid and cyclic oxy compound.

589

## Fish Supply

More than 10,500,000 pounds of fish that ordinarily would have been wasted in peacetime have gone into consumer channels since the Massachusetts Committee on Increased Utilization of Food Resources began operating in co-operation with the Massachusetts Fisheries Association just over a year ago. This has been announced recently in a report.

At least six varieties of fish previously unknown to home-makers have been added to wartime menus, including ocean pout, alewives or river herring, mussels, raja fish, angler fish and rosefish roe.

590

# Technical Topics

**CAMPBOR DOUBLES SIZE**—Camphor has been found useful in the production of food yeast. The organism *Torulopsis utilis*, used in the microbiological synthesis of protein, has in the past proved troublesome, since its cell size is so small as to enable passage through the filter cloth in the final separation process. English workers have found that the addition of a small quantity of camphor to the growing media doubles the size of the cells and thereby improves filtration.

591

**NAVY LACQUER DYES**—Navy blue lacquer dyes are claimed to be formed by coupling diazotized aryl-azo-anilines containing acidylamino groups in the aniline nuclei with aromatic amines capable of coupling in the para position to an amino group which carries at least one substituent. The dyes are also specified as suitable for cellulose acetate spinning solutions.

592

**SCUM CONTROL** — Tests have been made to determine the value of certain essential oils in controlling the development of scum formations on the surface of fermenting foods and beverages. Several were found to have value.

593

**LICORICE** — Licorice from California now being shipped East in early carloads, will be used to lessen our dependence on foreign countries. Planted wild in 1870, the root has flourished but until now has never been harvested.

594

**SKIN PROTECTOR** — A waterproof cream formulated to protect any part of the body against certain acids, alkalis and caustics in dry and aqueous forms, as well as miscible cutting compounds, is available to combat industrial dermatitis, or for home, garden or office use. Said to resist penetration of 20% sulfuric or nitric acids. Hot water is the dispersant.

595

**SALT WATER BREAD**—When in a spot where neither fresh water nor salt is available, U. S. Army bakers can produce bread if they're near the sea. Quartermaster Corps laboratory tests, substituting sea water for fresh water and salt, have developed a satisfactory bread formula.

596

**KRAUT CANNING**—Dark color, pink kraut or soft kraut stem from salt variation and distribution through shredded cabbage, it is claimed. The kraut problem of canning in large containers for the Armed Forces has been aided by a pre-heated tank method.

597

**FRUIT COLOR** — Canners and other processors of fruit products will hail the possibility of inhibiting the discoloration of freshly-cut fruit by treatment with a thiocyanide solution and freezing.

598

**DEXTROSE SWEETNESS**—The sweetening power of the corn sugars in ice cream is revealed as considerably higher than previously published values, according to a recent study.

599

**WALNUT "C"**—A high content of ascorbic acid (Vitamin C) has been found in hulls of certain American walnuts as they approach maturity. The acid exceeds that in rose hips, where its discovery caused much interest here and abroad last year.

600

**ETHYL BROMIDE**—Suggested in New Zealand as a fumigant for cheese. The agent is declared to satisfactorily control cheese mites without detrimental effect on the flavor of the treated cheese.

601

**PEAT WAX**—Offers possibilities as a replacement product for carnauba, montan, and bees wax, it has been found in recent investigations by the Imperial Institute. A benzene extraction method was employed to obtain the wax, which amounted to about 10 percent of the air-dried weight of the peat. Peat may possibly become a major industrial raw material. The recent discovery of the almost complete solubility of peat in tetralin opened great possibilities.

602

**MERCURIATED CARVACROL DERIVATIVES**—Found to be very effective in combatting the pathogenic fungi responsible for athlete's foot. Best results were stated to have resulted when the compound was administered in a water-soluble paste, in combination with salicylic and benzoic acids.

603

**BUTTER MOLD RETARDANT**—Wrappers specially impregnated are said to retard mold in butter and cheese in Canadian experiments.

604

Every effort will be made to furnish additional information on these articles. Where such information is not obtainable, we will refer inquiries to the original source of the article. Write to National Can Corporation, 110 East 42nd Street, New York City. Please mention the number at end of article—also name of the magazine you saw it in.

## NATIONAL CAN CORPORATION

Manufacturers of  
SANITARY PACKERS CANS · PLAIN AND  
LITHOGRAPHED CANS FOR FOODS, DRUGS,  
OILS, PAINTS, VARNISHES · STEEL DRUMS  
AND PAILS

Deliveries Subject to Priority Ratings  
(Advertisement)

# GOOD NEWS FOR LIVESTOCK SPRAY MANUFACTURERS

## ESSENOL #183

In these days of shortages, it becomes a pleasure to speak of a product which is available in adequate if not unlimited quantity, and which is not (as yet) subject to allocation or restriction.

ESSENOL #183 was developed four years ago as an effective and safe repellent for use in livestock sprays. Many manufacturers have used it with excellent results, but until now the supply situation has been too uncertain to justify encouraging more general use.

The supply outlook for 1944 is such that in addition to covering the requirements of present customers we can make substantial amounts available to others.

Two or three percent of Essenol #183 added to a livestock spray formula means effective repellency and a slight increase in killing power, but little added cost.

**DODGE & OLCOTT COMPANY**

180 VARICK ST., NEW YORK 14, N.Y.

BOSTON • CHICAGO • PHILADELPHIA

ST. LOUIS • LOS ANGELES

Plant & Labs. . . Bayonne, N. J.



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## *Zip-On Floor Treatments*

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# **ZIP-ON Rubless FLOOR WAX**

**A**N especially high-grade emulsion wax for the trade . . . designed for easy and fast application . . . giving high gloss . . . unusually water resistant . . . maximum non-skid properties . . . will not jell or become pasty in storage . . . gives a durable and attractive finish . . . can be sold to industrial and institutional customers with full confidence . . . write us for sample and prices . . .

\* \* \*

Our full line of floor-treatments also includes paste and liquid solvent waxes, floor sealers, gym finishes, etc., as well as metal and furniture polishes . . . we specialize in bulk and private brand products for the trade.

\* \* \*

## **SHAWMUT SPECIALTY CO.**

313 CENTRE STREET

BOSTON, MASS.

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## *Zip-On Floor Treatments*

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# *Introducing*

**A NEW**

Organic Insecticide for Crawling Insects

## **NH** INSECT DUST

A NITRATED HYDROCARBON DERIVATIVE

- 1.** Has quick action and "drive out."
- 2.** Kills insect eggs in addition to acting like a Pyrethrum-Sodium Fluoride combination.
- 3.** Gives high kill and long residual action.
- 4.** Costs less than Pyrethrum powder.
- 5.** Eliminates the hazard of using highly poisonous powders.
- 6.** Ideal for packagers of "Roach Powders" or for service work against roaches, bed bugs, ants, silverfish.
- 7.** Offered to you only after our customary careful laboratory and field studies, including months of practical trial by numerous Pest Control Operators.

*Pyriscents*—If you have a perfuming problem, investigate these specially compounded insecticide perfumes. Pyriscents are available in many odors and are completely oil soluble.

*"Ask us for a sample"*

**JOHN POWELL & CO., INC.**  
**114 East 32nd Street, New York City.**

# It Can Help You!



**Y**OUR Association, the National Association of Insecticide and Disinfectant Manufacturers, is carrying an advertising schedule addressed to the Dairy Products Industries, *in order to help you sell more of your products.*

Your Association selected The Dairy Industries Unit, which we publish, to carry their advertising messages.

It is most logical for you to advertise in the Dairy Industries Unit in order to cash in on the Preparation for Selling, which the Association is doing.

The Dairy Industries Unit is composed of three monthly dairy products business papers: The MILK DEALER, NATIONAL BUTTER and CHEESE JOURNAL, and The Ice Cream REVIEW.

You may advertise in the three papers, as a unit, or select one or more which is especially fitted to produce business in the territory you are able to serve economically.

We will be glad to tell you which of the publications you can use with the best prospects for business. And we will quote rates, etc., when you request them.

Since both insecticides and disinfectants are used more extensively in the spring and summer months—when insects are prevalent and milk production is heaviest—we suggest this as being the BEST time to begin YOUR advertising campaign.

Write today for full information.

THE OLSEN PUBLISHING COMPANY  
505 West Cherry Street  
Milwaukee 12, Wisconsin

*The*  
**MILK  
DEALER**



*National*  
**BUTTER and Cheese  
JOURNAL**



*The*  
**ICE CREAM  
REVIEW**



---

## There are some wounds no drugs can heal!

**W**HEN a man is hit in battle, he gets the best of care. No effort, no expense is spared to save our wounded boys.

But there are some wounds no drugs can heal . . . the wounds that come from loneliness, from being far from home . . . the wounds that come from worry . . . the wound of missing you until his heart breaks and he feels he can't go on.

There are no drugs for wounds like these — no drugs except a mother's touch.

And that is where the Red Cross—your Red Cross comes in.

For the Red Cross is still the Greatest Mother in the World. All over this earth—wherever our fighting men go—the Red Cross is with them. Its Clubmobiles stand at desert crossroads. Its rest homes will be found

on every front from London to Calcutta. Its packages reach the prisoners of war in far-off camps . . . get through the barbed wire straight from your hearts . . . with fine American food and real American cigarettes and tobacco.

\* \* \*

When you say "Thank God for the Red Cross" remember this . . . it is *your* Red Cross . . . *your* bandages and *your* blood.

*Yes, and your money too!*

Of course, you have given generously before. Of course you will give again.

But this year, when the need is greater than ever before . . . when it's *your own sons* we serve . . . this year dig deep and be glad.

For wherever he is



## The RED CROSS is at his side and the Red Cross is YOU!

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THIS SPACE CONTRIBUTED BY THE PUBLISHER

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# FELTON PERFUMES

FOR

## INSECTICIDE

## SPRAYS

**WHEN AN INSECTICIDE SMELLS GOOD...  
IT SELLS GOOD!**

That's why Felton Kerex perfumes have been so widely used in many of the country's fastest-selling insecticide sprays.

Try them without delay! You'll find there is an ideal Kerex perfume for your particular insecticide product—whether you still use a Pyrethrum base or some of the new synthetic bases such as Lethane, Pyrin, Thionin, etc.

Send us a sample of your unperfumed spray so that our chemists can recommend the best odor cover for it!



**FELTON**  
CHEMICAL CO., INC.  
588 Johnson Ave. ELIZA, N. Y.

BRANCHES IN PRINCIPAL CITIES  
Mfrs. of Aromatic Chemicals, Perfumes and Essences, etc.



... to rehabilitate the atmosphere in your home, store or factory, if the spray used is scented by those who know how to nullify the "killer odor" with a perfume that exits with just the right speed. We know how—we do it—it works!

Send us a gallon of your insecticide unperfumed. When we return it perfumed you will recognize that experience and skill are behind the job.

**VAN AMERINGEN-HAEBLER, INC. • 315 FOURTH AVE. • NEW YORK**





***“We’re Working for the day when the fishing rod will replace the ramrod—”***

Usual business practices have changed considerably since the war began. Here at Prentiss we are doing our utmost to meet government requirements as most of the available pyrethrum is being used by our armed forces for the prevention of malaria and other important uses that protect our fighting men who are far from home.

We are doing everything possible to ‘make a little go a long way,’ to help alleviate this pyrethrum condition among the many Prentiss customers whom we serve during normal times. But when these normal times return Prentiss will be in a better position than ever to meet your pyrethrum requirements. Yes, we have been doing considerable post-war planning, and you can plan also, to include Prentiss Pyrethrum Concentrates in your post-war products.

FORTIFIED ACTIVATED STANDARDIZED RED SQUILL POWDER—write us for information



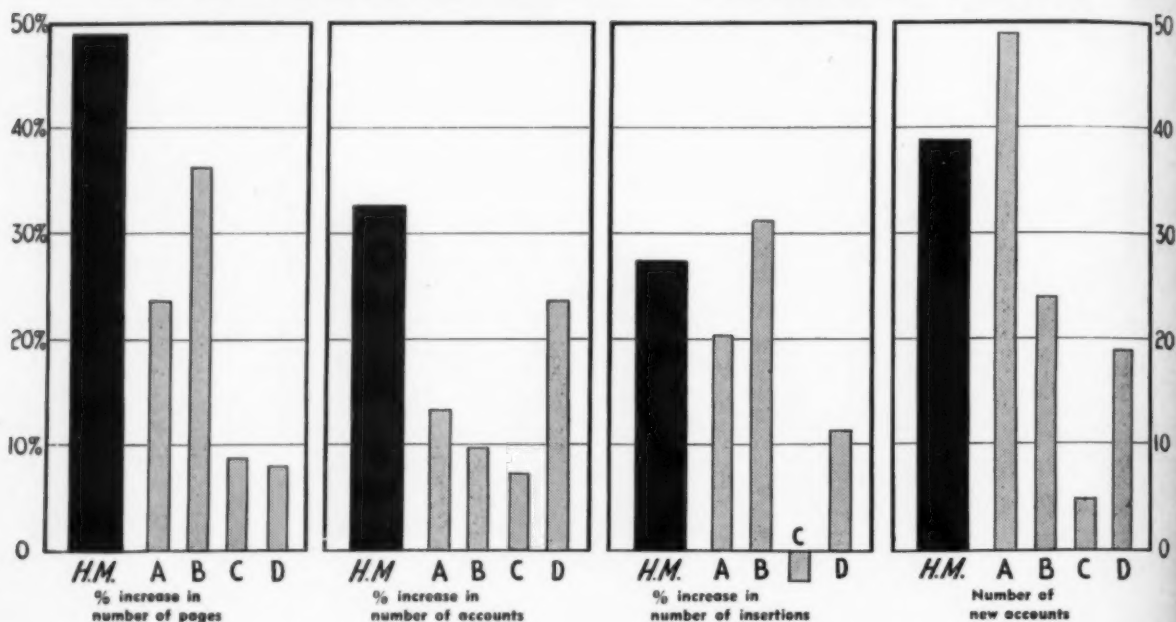
**R. J. PRENTISS & CO.**

80 JOHN STREET, NEW YORK 7, N. Y.

9 SO. CLINTON ST., CHICAGO 6, ILL.



# PROGRESS REPORT



Here is a picture of what advertisers think of HOSPITAL MANAGEMENT.

It shows that they have given HOSPITAL MANAGEMENT the greatest percentage increase in advertising volume accorded any publication in this field for the first six months of 1943.

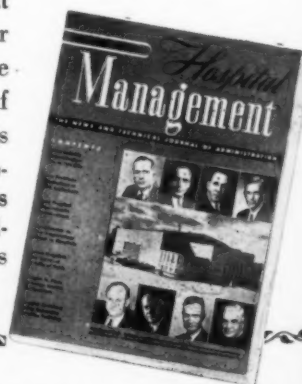
This is a picture of interest to you because it points the way to one of your biggest markets. More than 1,125,000 people occupy hospital beds every day and a like number are needed to attend their every want. They must live in an atmosphere of super-cleanliness.

HOSPITAL MANAGEMENT offers you a most economical and effective method of telling the buyers in this market of the advantages of your products. Going directly to more than 5,000 superintendents and department executives, HOSPITAL MANAGEMENT is able to and does produce results for its advertisers.

Editorial vitality — in developing, promoting and crystallizing opinion — has given HOSPITAL MANAGEMENT the tremendous reader-interest which made possible the astonishing record charted above.

Its editorial achievements, coupled with exclusive news-gathering facilities, give each issue impact on the market. That in turn spells results for advertisers, for only editorial power can put punch into advertising pages.

There is a great deal more to our story. We'd welcome the opportunity of giving you details about how our supplementary services will help your advertising create sales for you.



## HOSPITAL MANAGEMENT



The only Hospital publication which is a member of both the ABC and ABP.



100 E. OHIO STREET, CHICAGO (11) • 330 W. 42nd STREET, NEW YORK, (18)

MANY MANUFACTURERS REPORT BETTER SUCCESS WITH YOUR CONTAINERS AND CLOSURES. WHY, MR. JENSEN?

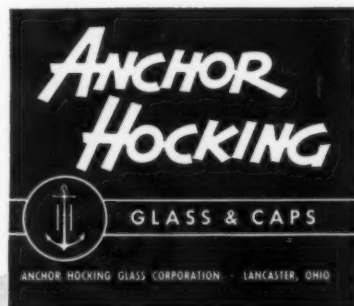
BECAUSE WE HAVE THE KNOW-HOW



Anchor Hocking has long led in the engineering development of better glass containers, closures, and packaging methods. Our research facilities are tirelessly at work, our laboratories always ready to help manufacturers with their individual problems. Anchor Hocking glass containers and caps are manufactured under exacting control—in conformity with management's uncompromising standards—by highly skilled, precision workers who have been with the company 10, 20 years or more. Those are some of the reasons why Anchor Hocking containers and closures bring drug and chemical manufacturers "better success"...why they perform so well on the production line...why they are safe and economical...why they withstand the hard knocks of production, handling and transportation.

"Meet Corliss Archer" every Saturday afternoon, entire coast-to-coast network CBS.

**N. J. JENSEN**, one of Anchor Hocking's ablest and most popular men, has been a member of the Anchor Hocking family for 12 years.





## ... Official Test Insecticide (O.T.I.)

**S**UPPLIES of the 1943 Official Test Insecticide for evaluating fly sprays by the Official Peet-Grady Method are available only from the office of this Association. The O.T.I. is priced at \$5.00 per dozen six-ounce bottles, plus shipping costs, to members of this Association. To others, there is an additional service charge of \$1.00 per dozen. Single bottles are \$1.00 each. Check with order is required.

The 1943 Official Test Insecticide is required for all official testing of fly sprays by the Peet-Grady Method for the period from June 1, 1943 through May 31, 1944.



### National Association of Insecticide & Disinfectant Manufacturers, Inc.

110 East 42nd Street

New York

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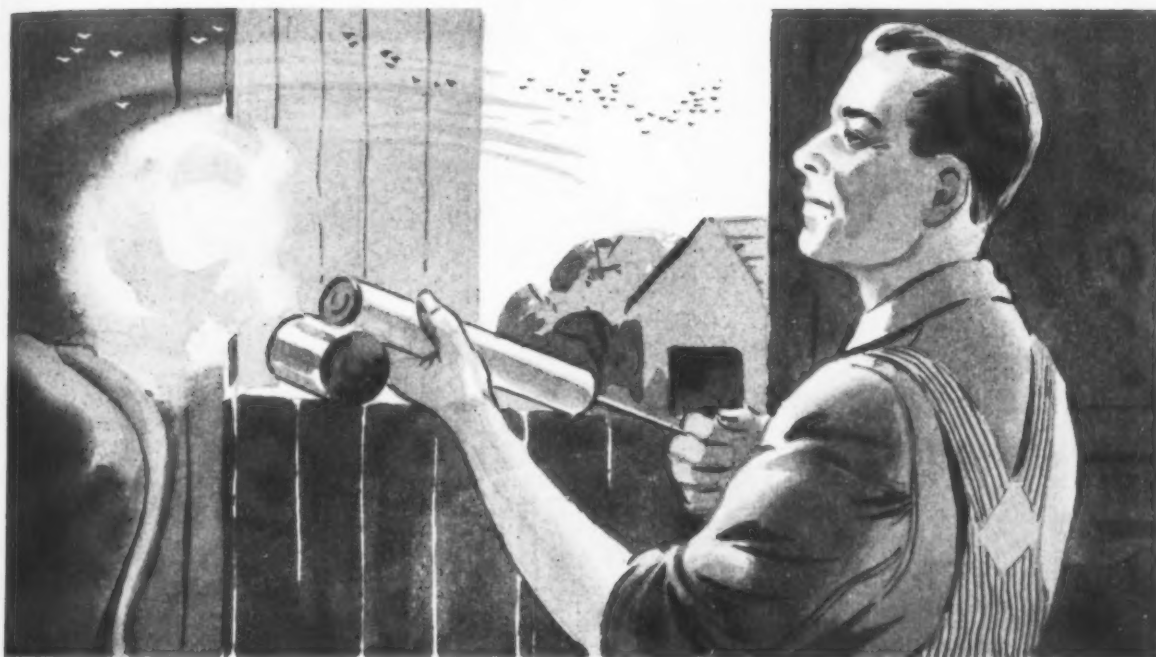
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*Improve your stock spray.... Use*

# VELSICOL AR-60

**It repels flies .... kills flies .... replaces critical materials \***



**Y**OUR customers, *and you*, know that a cow *not* bothered by flies is more productive. Velsicol AR-60 has been tested on university experimental farms where its stronger repellency and AA kill were demonstrated. This *more powerful* repellency will give greater performance to your stock spray . . . and the value of its superior effectiveness is in increased consumer demand. For example, the sales of one leading manufacturer increased 300% after adopting a

In your household sprays for flies, bedbugs and mosquitoes, use VELSICOL AR-50.

Velsicol formula.

Let Velsicol AR-60 increase the saleability of your products. Write today for full information. You'll receive prompt, individual attention.

*An abundant supply of AR-60 is still available. Order now!*

## VELSICOL

*Corporation*

GENERAL OFFICES: 120 EAST PEARSON STREET, CHICAGO



PLANT: MARSHALL, ILLINOIS

# YOUR 8.5 BILLION DOLLAR MARKET

Mass Feeding  
Mass Housing

Each month INSTITUTIONS Magazine reaches:

- HOTELS
- HOSPITALS
- SCHOOLS
- RESTAURANTS
- INDUSTRIAL CAFETERIAS
- COLLEGES
- PUBLIC INSTITUTIONS
- YMCA's and YWCA's
- RAILWAY SYSTEMS
- STEAMSHIP LINES
- PUBLIC BUILDINGS
- OTHER INSTITUTIONS

and . . . for the duration of the war—in addition to its regular circulation. INSTITUTIONS Magazine is being sent to buyers and specifiers of mass housing and mass feeding products for those directly engaged in the war effort.

## A BIG Market of BIG Consumers

THE readers of INSTITUTIONS Magazine represent a post-war market of huge proportions . . . an 8.5 billion dollar post-war market that is yours today! The readers of INSTITUTIONS Magazine are the big consumer buyers of all types of mass housing and mass feeding products . . . the buyers by whom this 8.5 billion dollars will be spent. The readers of INSTITUTIONS Magazine will expend a large percentage of this figure for maintenance supplies of all kinds.

These are the men and women who depend upon INSTITUTIONS Magazine for authoritative assistance on their immediate and post-war problems . . . for the type of product information they must have in directing their planning and buying on a practical and sound basis.

Manufacturers of soaps, disinfectants, insecticides, floor treatment materials, cleaning compounds and other similar products who are now advertising to this huge market through INSTITUTIONS Magazine are using the most effective and most economical means of approaching these big consumer buyers. These manufacturers are not only enjoying the immediate benefits of this market . . . they are also building for themselves a preferred position among institutional managements in the post-war period.

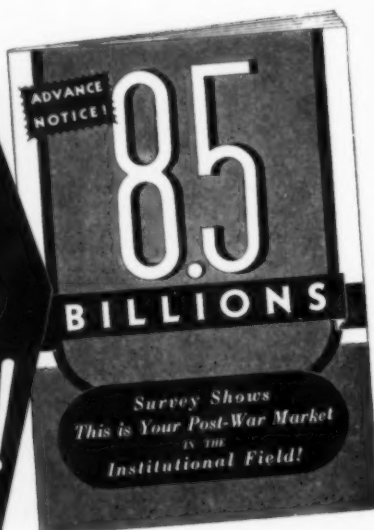
INSTITUTIONS Magazine is the only publication through which you can reach all related divisions of the institutional field. If your present or contemplated products have an application to this field, your advertising messages in the columns of INSTITUTIONS Magazine will gain for them the kind of acceptance they must have to share in the 8.5 billion dollar institutional market.

YOUR POST-WAR MARKET IS HERE TODAY!

... NEW STUDY GIVES

### FACTS AND FIGURES!

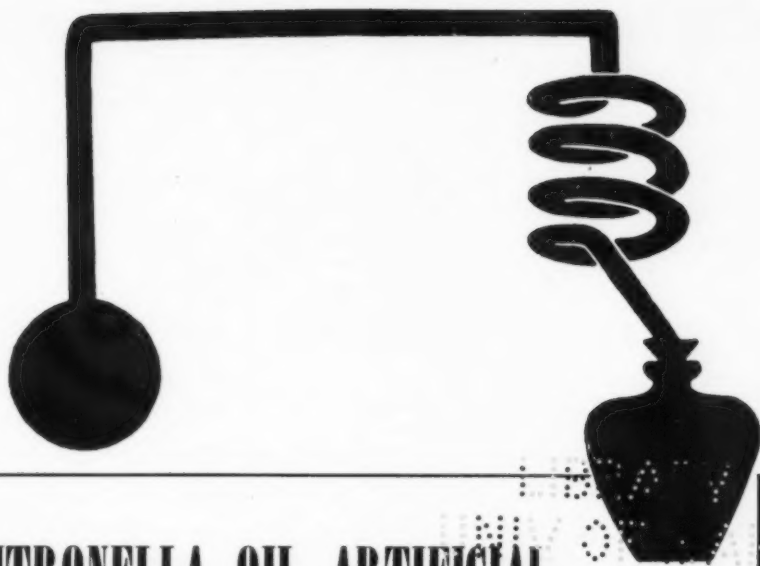
Consult Your Advertising Agency



To determine the size and extent of the post-war market in the institutional field, INSTITUTIONS Magazine conducted a survey among over 50,000 hotels, hospitals, schools, colleges, restaurants and other types of institutions. The findings of this survey—which have been presented in this booklet—are of special interest to all manufacturers now serving or planning to serve this field. To obtain details on this survey, or for information on the application of your products to the mass feeding and mass housing market, consult your advertising agency or write direct.







**CITRONELLA OIL ARTIFICIAL**

**SPANISH ROSEMARY**

**SPANISH SPIKE LAVENDER**

**ARTIFICIAL SASSAFRASS**

For many years much of the research and development work of our laboratory has been devoted to the perfumery problems of the soap and sanitary chemicals industry. As a result we have been able to supply synthetic products successfully to relieve shortages caused by war conditions. Why not consult us regarding your problems? Samples upon request.

**ESSENTIAL OILS  
and  
SYNTHETICS**

BERGAMOT  
CASSIA  
CEDARWOOD  
CEDARLEAF  
CLOVES  
GERANIUM  
LAVENDER  
THYME  
WINTERGREEN  
PETITGRAIN  
BENZYL ACETATE  
TERPINEOL  
AMYL SALICYLATE  
ANETHOLE  
CINNAMIC ALDEHYDE  
CITRONELLOL  
EUGENOL  
ISOEUGENOL  
HELIOTROPINE  
ISOBORNYL ACETATE  
LINALYL ACETATE  
IONONES  
MUSKS  
TERPINYL ACETATE

**PERFUME BASES**

ROSE  
LILAC  
JASMIN  
LAVENDER  
CARNATION  
SWEET PEA

**STANDARD SYNTHETICS, INC.**

30 WEST 26th STREET

NEW YORK 10, N. Y.

BRANCHES AT

CHICAGO

SAN FRANCISCO

KANSAS CITY, MO.

March, 1944

Say you saw it in SOAP!



## LOOKING FORWARD TO THE NEWER PYRETHRUM PRODUCTS

This nation, called upon to meet the challenge of "total war," has reached out boldly into many fields of scientific development. . . . Notable among its achievements is the gain it has made in malaria-control in combat areas overseas.

Destroying anopheles mosquitoes is the wartime job of pyrethrum. . . . When supplies are released for peacetime use, the insecticide manufacturing industry will profit by the impetus given pyrethrum by recent chemical research.

### S. B. PENICK & COMPANY

735 W. Division St., Chicago 10, Ill.  
Telephone: MOHawk 5651

50 Church St., New York 7, N. Y.  
Telephone: COrtlandt 7-1970

*Buy War Bonds and Stamps — for Victory*

**THE WORLD'S LARGEST BOTANICAL DRUG HOUSE**

# **SHELL REGULAR BASE**

**Refined to meet the needs  
of modern household  
insecticide manufacturers**



**SHELL OIL COMPANY, INC.**

**50 WEST 50TH STREET**

**NEW YORK 20, N. Y.**



# SANITARY PRODUCTS

their manufacture, testing and use

By Leonard B. Schwarcz

## CONTENTS

**Sanitary Products Industry** — reviewing the type firms in the industry, the products they manufacture, and their annual value.

**Discovery of Bacteria**—historical background on the germ theory of infection.

**Principles of Disinfection** — the role of chemical preparations in disinfection; definition of disinfectant terms.

**Coal Tar Disinfectants**—a review of their manufacture and use.

**Cresol Compounds**—Liquor Cresolis Compositus, B.A.I. Compound, petroleum-type cresylics.

**Pine Oil Disinfectants**—manufacture, properties and uses.

**Hypochlorites**—manufacture, properties and uses of chlorine disinfectants.

**Formaldehyde**—its applications in the disinfectant field.

**Oil Soaps**—manufacture, sale and use of jelly soaps, green soaps, auto soaps, floor scrubbing soaps, etc. Special attention is given to manufacture of oil soaps from fatty acids.

**Liquid Soaps**—The case for liquid soaps for wash-room use. A review of raw materials, manufacturing methods, use, etc., with special attention to the problems of clarity, concentration, dispensing equipment, etc.

**Soap Dispensers**—a review of the common types of liquid and powder soap dispensers, push-in, push-up, tilt, goose-neck, pullman, etc.

**Floor Waxes**—A review of raw materials for floor wax manufacture and a study of manufacture and application of liquid waxes, paste waxes, water-emulsion waxes.

**The Insect Problem**—A review of the general role which insecticides must fill in man's battle against the insect world.

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**Appendix**—Complete text of Insecticide Act of 1910, Caustic Poisons Act, Peet-Grady Test for Insecticides, FDA Method for Disinfectant Testing, Mercury Reduction Method, Seil Method, NAIDM Specifications, list of approved antidotes.

SANITARY PRODUCTS has standard high-grade book binding, cloth and board covers, 6 x 9, 312 pages. Priced at \$5.00 per copy. Check must accompany order. Orders for books to be sent on approval cannot be accepted, but the usual return privilege will be accorded where copies are returned unmarred within 10 days. Owing to present conditions, the first edition must be limited. Accordingly an early order accompanied by check is suggested.

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# SANITARY PRODUCTS

## A SECTION OF SOAP

*Official Publication*

National Association of Insecticide & Disinfectant Manufacturers

**W**HAT appears to be almost an epidemic of citations by the Department of Agriculture during the past month or so against manufacturers of roach powders has been noted. These citations are chiefly for misbranding under the Insecticide Act of 1910, and probably grow out of the various materials which have been used in attempts to turn out non-poisonous roach powders in the absence of pyrethrum. That various new things may have been used without sufficient testing and particularly aging could be the case. That labels have been made up inaccurately and incorrectly in the haste to meet the demand is also likely. All of which seems to indicate again that marketing any insecticide material without careful testing is dangerous.

Manufacturers who have put out new type roach powders during the past six months might do well to check their products now, and if necessary obtain some expert advice on the matter.



**W**ILL the aerosol type insecticide replace to a considerable extent the regular liquid household insect sprays in the post-war markets? This question has been discussed and debated from all angles over the past six months in and about the insecticide industry. The answer will determine to a great extent who will get the household insecticide business after the war and which manufacturers will rise and which will fall. Are we on the threshold of a revolution in the entire insecticide industry, or is the aerosol development essentially

a product of war which is too expensive for ordinary civilian peacetime use? Within the industry, opinion on this question varies from one extreme to the other.

We are glad to hear that this subject is going to be brought out in open forum and discussed from all angles at the mid-year meeting of the National Association of Insecticide & Disinfectant Manufacturers to be held in Chicago in June. Whether the correct answer is found or not as a result of the forum, the information provided by a number of leading experts from the Department of Agriculture and the industry who will take part may be of invaluable aid to many manufacturers in plotting their post-war courses. The idea is certainly to be commended.



**A**S MORE and more men are called for duty by the armed services, most manufacturers begin to find it well nigh impossible to obtain replacement personnel with even a smattering of experience. In most small plants, lacking the flexibility of a large body of employees, the acuteness of the manpower problem appears to be inversely proportional to size. If we may judge from recent observations, the point has about been reached where a further loss of men in the face of a dearth of replacements will hamstring many industries and greatly reduce their ability to supply vitally needed war and civilian goods. Will serious industry failure be needed to prove this to Washington?

# METHYL BROMIDE FUMIGATION

J. Carl Dawson  
The Dow Chemical Company

METHYL bromide was first used commercially as a fumigant in California for the fumigation of living plants and plant material following experimental work carried on by D. B. Mackie,<sup>1</sup> who had closely followed the work by Le Goupil,<sup>2</sup> the original discoverer of its insecticidal properties. It was found that many varieties and species of plants would tolerate concentrations of methyl bromide that would completely eliminate insect infestation. This property resulted in its being written into both state and federal plant quarantine regulations. Many plants and plant products previously embargoed under quarantine regulations were now permitted to be shipped, after methyl bromide fumigation.

Methyl bromide is a fumigant with properties that vary widely from other fumigants commonly in use. It is a clear liquid with a boiling point of 40.1° F. (4.5° C.), which results in its being under its own vapor pressure in the container when above this temperature. Its specific gravity is 1.732 at 0° C. The specific gravity of the gas is 3.27 at 0° C.

Methyl bromide fumigation was found valuable as a commercial treatment for fresh fruits and vegetables in which infestation could develop in transit. The most extensive use in this field is for the fumigation of fresh pears and apples infested with codling moth eggs and newly hatched larvae. Fruit so infested cannot be graded out. Fumigation will completely eliminate



*Ability of methyl bromide to penetrate large masses of packaged and bagged food products is one of the characteristics that make it particularly applicable, under controlled conditions, for the fumigation of stored flour, grain, etc. Tight sealing of the area to be fumigated is essential to prevent escape of the gas.*

infestation, thus preventing development in transit or in storage while awaiting the canning process. It was also found to be an excellent fumigant for dried fruits.

Early attempts at practical application in the large scale fumigation of food processing plants and warehouses failed to give satisfactory results, largely because of improper methods of application. Its ability to penetrate large masses of packaged and bagged food products had been demonstrated. It was a regular practice to fumigate one-pound boxes of raisins packed in sealed cartons, and methyl bromide would completely penetrate every

package within the carton. It had also been demonstrated that it would penetrate to the center of 140-pound bags of flour, when applied in a fumigation chamber. This ability to penetrate through large masses of material in paper and cardboard cartons, suggested the idea that the poor results previously obtained in large building fumigation might be the result of the sealing materials that had been used to seal doors, windows, ventilators and other openings. Laboratory tests revealed that the old-fashioned practice of stuffing burlap bags into ventilators and other openings and the use of kraft paper as a complete seal over large openings

<sup>1</sup> Mackie, D. B. 1938. Methyl Bromide—Its Expectancy As a Fumigant. Jour. Econ. Ent. 31:70-79.

<sup>2</sup> Le Goupil. 1932. Les Propriétés Insecticides Du Bromure De Méthyle. Rev. de Path. Vég. et d'Ent. Agr. de France 19: 169-172.



*For fumigation of a soldier's garments in the field a portable fumigation bag is finding extensive use during the present war. Photo, courtesy of the U.S.D.A., shows the ampule of methyl bromide in its shipping carton, placed in a special pocket in the soldier's fumigation bag. The ampule is broken to release the gas.*

failed to stop the loss of methyl bromide vapors. It was found that coated papers offered high resistance to penetration.

Field tests in the fumigation of large buildings were then repeated, using only material for sealing that had shown resistance to methyl bromide penetration in the laboratory. The results obtained were extraordinary, in that no living insects either in test boxes or in existing infestation could be found. The halide leak detector also revealed that aeration was completed in a matter of only a few hours.

Because of the high specific gravity, early commercial fumigations of plants and plant products were al-

ways performed in a fumigation chamber, in which circulation was provided throughout the fumigation period. In the fumigation of large buildings, it was found advantageous to use circulation only for 15-30 minutes, which resulted in thoroughly mixing the methyl bromide with the air, with a minimum of leakage. Without circulation, methyl bromide will frequently stratify near the floor and fail to develop a lethal concentration in the higher portions of the fumigated space. Methyl bromide is being used extensively in food processing plants and food warehouses and, as industrial fumigators have become better acquainted with the technique

of application and consumers have had an opportunity to see the excellent results that are being obtained, its use for these purposes has increased rapidly.

Test fumigations reveal that the application of the methyl bromide near the ceiling of the fumigation chamber gives the necessary equality of distribution usually provided for by fans. This same technique can be used in the fumigation of boxcars. The fumigant may be conducted into a car through copper or "Saran" plastic tubing to a point near the center of the car about a foot below the ceiling, where a "T" fitting is attached. When the methyl bromide is applied, it will be released from the "T" parallel with the ceiling.

The first tarpaulin fumigations were performed in California under rubberized cloth, with excellent results. Material to be fumigated was placed in a stack which could be completely covered by the tarpaulin. Packages, cartons or bags were placed in such a way at the top center of the stack as to result in an unoccupied area when the tarpaulin was in place. Methyl bromide was then applied through tubing to the center of the unoccupied area, which acted as an expansion dome. With this technique of application, excellent results were obtained. The rubberized tarpaulin, however, had the disadvantages of being heavy, hard to carry, and of reacting, in time, with methyl bromide to acquire a disagreeable odor.

Work in the Dow laboratories resulted in an ethyl cellulose coated fabric, which was much lighter and easier to handle and was not affected by methyl bromide vapors. This plastic-coated tarpaulin came into commercial use just before Pearl Harbor.

**I**N preparation for the possibilities of conflict, the War Department had requested the Federal Bureau of Entomology and Plant Quarantine to investigate the feasibility of using a fumigant for delousing clothing, to replace the old steam sterilization method used in World War I. The fumigant



desired had to be rapid in action, non-injurious to clothing and equipment, effective at low temperatures, not too dangerous to handle, and without undesirable post-fumigation residues or odors. A long list of fumigants was investigated and methyl bromide was found to be excellently adapted to the purpose. A knock-down, portable plywood fumigation chamber was designed for use at delousing stations. It was light in weight and easily movable, which would permit it to be used at points near the battle line.

The use of fumigation tarpaulins suggested the idea of the fumigation of clothing in small, lightweight, plastic-treated fumigation bags. Such bags made of cloth treated with either ethyl cellulose or "Neoprene" gave excellent results. A standard-size bag requiring 20 cc. of methyl bromide was adopted. Methyl bromide for field use is packed in glass ampules encased in a protective cloth covering. The soldier places his clothing in the bag, including the ampule, then closes the bag and breaks the ampule. After a short exposure period, all lice, including the eggs, are eliminated. This has proved to have many advantages over the old-fashioned steam sterilization method, which would shrink clothing, leave it damp, and result in creases and wrinkles that seemed never to come out. The high degree of mobility of both the lightweight fumigation chamber and the bag permits much more frequent delousing than was possible with the heavy steam sterilizers.

Although delousing is the most spectacular war use of methyl bromide, it is also serving an exceedingly valuable purpose in the fumigation of all types of dry food products. Its ability to completely penetrate packages and large warehouse masses of bagged food products permits the entire elimination of all insect life in such products prior to their leaving our shores for the long trip to our allies and our fighting fronts. Thus insect infestation is so completely eliminated that it is possible to use fewer metal and glass packages for such commodities. Tarpaulin



*When troops are at stations where such facilities are available, use is made of fumigation chambers. Here such a chamber is shown loaded with barracks bags of clothing, prior to fumigation with methyl bromide. U. S. D. A. photo*

fumigation, like the delousing bag, may be available anywhere, so that infestation can be kept under control at the fighting front.

One of the more recent developments is the use of methyl bromide for the fumigation of cheese coolers, cheese manufacturing plants, and other dairy products plants. The fumigation process completely eliminates insect and rodent life within the dairy plant.

At the present time, a War Production Board allocation order confines the use of methyl bromide to delousing and food fumigation. Investigational

work on other applications is being continued so that after the war, it may be expected to serve many new useful purposes. It is necessary, however, for commercial fumigators and others who carry out the practice of fumigation, to revise their methods to fit the peculiar chemical properties of methyl bromide. They will have to learn that it is a material that cannot ordinarily be poured into pans or otherwise handled as a liquid, but is self-propelling at temperatures above its boiling point and is conducted into the space to be fumigated through tubing or is simply released from cylinders spotted throughout the building; that special sealing materials are necessary because of its high penetrating power; and that in all large scale fumigation operations, it must be artificially circulated and mixed with air, if most efficient results are to be obtained.



# QUATERNARY AMMONIUM DISINFECTANTS

By P. G. Bartlett\*

Robm & Haas Co.

QUATERNARY ammonium salts are a comparatively new development in the disinfectant field, representing quite a decided change from the older and more familiar types of disinfectants. For that reason, there has been considerable interest in and discussion regarding them. As industrial chemical products, however, the quaternary ammonium compounds are not particularly new. They were studied and developed for use as wetting agents more than a dozen years ago. The group of Somerville patents of 1931 and 1932, assigned to our company, specifically relate to surface active and emulsifying compounds of the quaternary ammonium class, particularly of the type cetyl diethyl benzyl ammonium chloride. This early work was directed principally toward the development of improved emulsifying agents. The recognition and study of the bactericidal properties of such compounds was a later development.

Quaternary ammonium compounds may be represented as simple inorganic ammonium salts such as ammonium chloride, in which organic radicals have been substituted for all four hydrogen atoms of the ammonium group. A typical example is a compound containing two methyl groups, an aryl radical, such as a benzyl group, and a long chain group, all four attached to the nitrogen, to give a complex cation together with the chloride anion. The long chain group usually has oil soluble characteristics so that the compound as a whole has a construction that would be expected to have, and does have surface active

properties. Quaternary ammonium compounds are not to be confused with salts of tertiary amines, which similarly may have surface active properties, but are much less effective germicidally and are comparatively unstable and easily decomposed. Quaternary ammonium compounds are exceptionally stable and can be stored indefinitely.

Since the testing and evaluating of germicides or disinfectants is a highly specialized field, our early work was done in close collaboration with one of the leading pharmaceutical firms which has excellent facilities for testing and evaluating. This work covered an examination of a wide range of quaternary ammonium compounds which earlier work indicated in a general way were likely to prove most valuable. Quite an exhaustive study has been made of the various possible groups which may be substituted for the four hydrogens of the ammonium radical. Particular attention was paid to the "building blocks" used in the preparation of the long chain radical. The work has been sufficiently comprehensive to lead us to believe that it is going to be difficult to produce more active germicides or disinfectants of the quaternary ammonium type. As a result of all this background development work, a couple of closely related compounds are coming into use on an increasing scale. One compound is filling a steadily growing demand for use strictly in the field of pharmacy and medicine.

Bulk manufacture and sale in disinfecting fields was just about to get under way when the war came along, presenting problems of raw materials, equipment, man-power, etc. The Navy,

however, adopted the use of disinfectants of this type early in the war period, and since then a very large part of our production has gone to meet their requirements. It is expected, however, that in the future such compounds will be available for use in many fields in which they show promise.

Quaternary ammonium compounds are characterized by exceptionally high bactericidal activity, although there can be wide variations in the activity of different compounds within the group. In fact, a slight change in composition may increase activity against one organism and decrease activity against some other organism. This illustrates why it was necessary to conduct an exhaustive study to be certain of developing the most generally active and useful members of the compounds of this general class. Other advantages besides the high bactericidal activity are the relatively low toxicity, absence of any appreciable odor, and stability on prolonged storage. There is no appreciable loss of activity whether stored at room temperatures or at more elevated temperatures, either as a pure, dry powder, as a concentrated paste, or as a solution. Such solutions may be made with water, alcohols or a mixture of both. The aqueous solution has a pale, straw color and a very bitter taste which is noticeable even at extreme dilutions. Several series of patch tests of concentrated solutions have demonstrated practically complete freedom from dermatitis effects. As would be expected, such cation active salts react with the anion of a soap or similar wetting agent to form an insoluble and inactive complex. But, these quaternary

(Turn to Page 113)

\* Before 30th Annual Meeting, National Association of Insecticide and Disinfectant Manufacturers, New York, Dec. 7, 1943.



*Higher power... Lower cost*

## FOR YOUR LIVESTOCK SPRAYS

These facts about Thanite\*, the new toxic agent, are substantiated by laboratory findings; field tests conducted by Kansas State College; U. S. Government tests resulting in specification of Thanite for military use†; and growing records of consumer acceptance.

**HIGH KILL WITH LOW COST**—Just 3% Thanite produces a cattle spray with the killing power of an AA household spray!

**QUICK AND LASTING KNOCKDOWN**—Peet-Grady tests and field counts show Thanite has *extremely high knockdown* . . . even with high-viscosity base and in low concentration.

**LONGER-LASTING REPELLENCY**—Whereas most commercial sprays lose repellency after the first hour, Thanite sprays have shown *repellency beyond 7 hours!*

**SAFETY**—Thanite, itself harmless to warm-blooded animals, is equally harmless in a non-toxic base. Three years in succession, at Kansas State College, Thanite sprays were *proved harmless* to dairy cows.

\*Reg. U. S. Pat. Office by Hercules Powder Company.

**STABILITY**—Thanite does not lose its power even when exposed in flint glass to sunlight for over a year. It helps you avoid packaging problems, losses, and customer satisfaction!

**LOW RESIDUAL ODOR**—Even dairy products, most acceptable of foods, are unaffected in odor or taste when cattle are sprayed with Thanite-based formulas.

†This is a record of fact, not a Government endorsement.



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HERCULES POWDER COMPANY - WILMINGTON, DELAWARE

# N. A. I. D. M. . . .

Aims, purposes and some of the accomplishments of the National Association of Insecticide & Disinfectant Manufacturers reviewed

**N**EARLY every American industry has its own trade association today. It is well for industry that this is so, for business has become so complex, so closely hemmed in by laws and regulations, that management is confronted by an ever increasing array of common problems. That trade associations are vitally necessary in this day and age almost everyone will agree. Yet even those who are members and close to the operations of various trade groups do not always realize the amount of work done or the scope of accomplishments, or the benefits which accrue to all, both members and non-members, through the constant vigilance of our trade associations. Perhaps the fault lies with the associations themselves. Busy with matters of importance to their industries, there is little time to publicize accomplishments. Though members may receive regular and frequent bulletins, they are often read once and forgotten unless they are of continued important interest. Others seldom realize except through occasional publications in the trade or general press what is being done in their behalf by associations of which they are not members.

We, who are engaged in the manufacture and sale of disinfectants, insecticides, and sanitary specialties, know that we cannot reach the pinnacle of success by hiding the merits of our products. We let our customers know in every way we can what we have to offer. We cannot and do not expect them to remember all about us without constantly keeping in touch

\* Mr. Nelson, president of N.A.I.D.M., is president of the Chemical Supply Co., Cleveland.



By *Henry A. Nelson*, President\*

with them. That is as it should be. Business still goes where it is invited. And associations can help a great deal.

I would not write about N.A.I.D.M. if I thought that the industry as a whole were aware of the aims and purposes for which it was organized 30 years ago. From letters received, it is quite evident that certain erroneous impressions are in the minds of some individuals in and about the industry. Hence I shall sketch briefly what these aims and purposes are, and I will mention but a few of the many things which the association has accomplished over the years.

When the National Association of Insecticide and Disinfectant Manufacturers, Inc., was organized in 1914, the far-sighted founders gave us a road map by which to travel along a well-marked highway to a desired destina-

tion. Article III of our constitution says that the principal objects for which the association was formed are as follows:

*"To unite all reputable persons, firms, or corporations engaged in or allied with the business of manufacturing or distributing disinfectants, antiseptics, germicides, household insecticides, sanitary supplies and articles coming within the purview of the Federal Insecticide Act of 1910; to collect and disseminate information of interest to the members and of benefit to the trade; to establish closer ties of business association in said trade so that the welfare of all may be conserved; to cooperate in order that proper business usages and customs may be enforced; and to promote the mutual welfare of its members by the adoption and enforcement of such rules and regulations*



# The **FACTS**

## about HOOKER soap and sanitary chemicals

You may find the answer to one of your problems in this partial list of HOOKER products. They are the result of research and a background of knowledge of the soap and sanitary chemical field.

In spite of war-created demands for unprecedented quantities of HOOKER chemicals, the rigid laboratory control which guards their quality is never relaxed. HOOKER quality is maintained in war as in peace.

PRODUCT Chemical Formula Molecular Weight	DESCRIPTION All Specific Gravities at 15.5/15.5° C.	SHIPPING CONTAINERS
Benzoate of Soda—USP $C_{10}H_7COONa = 144.0$	White, odorless crystalline solid.	Fibre drums containing 25, 50, and 100 lbs.
Benzyl Alcohol (Tech.) $C_6H_5CH_2OH = 108.1$	Clear liquid Sp. Gr. 1.047 Boiling range 204-210° C.	1-gal. cans containing 9 lbs.; 5-gal. cans containing 44 lbs.; 55-gal. drums containing 438 lbs.
Bleaching Powder $CaO \cdot 2CaOCl_2 \cdot 3H_2O = 364.1$	White powder with chlorine odor.	Drums containing 100, 300, and 800 lbs.
Caustic Soda $NaOH = 40.0$	White deliquescent solid or clear viscous solution.	Drums containing 100, 220, 400, 700 lbs. and tank cars.
Chlorine, Liquid $Cl_2 = 70.90$	Orange liquid or greenish yellow gas.	Cylinders containing 100 and 150 lbs. Drums containing 2000 lbs. and tank cars containing 16 and 30 tons.
Monochlorobenzene $C_6H_5Cl = 112.5$	Clear, colorless liquid Sp. Gr. 1.113 Boiling range 131-132° C.	5-gal. cans containing 45 lbs. 55-gal. drums containing 500 lbs.
Monochlorotoluene $CH_3C_6H_4Cl = 126.5$	Clear, colorless liquid Sp. Gr. 1.0810 Boiling range 158-163° C.	5-gal. cans containing 44 lbs. 55-gal. drums containing 450 lbs. 110-gal. drums containing 900 lbs.
Orthodichlorobenzene $C_6H_4Cl_2 = 147$	Clear, colorless liquid Sp. Gr. 1.3125	5-gal. cans containing 54 lbs. 55-gal. drums containing 600 lbs.
Paradichlorobenzene $C_6H_4Cl_2 = 147$	White crystalline solid.	Fibre drums containing 25, 50, 100 and 200 lbs.
Sulfur Dichloride $S_2Cl_4 = 206$	Dark brown-reddish liquid Sp. Gr. 1.638	55-gal. drums containing 700 lbs. and tank cars.
Sulfur Monochloride $S_2Cl_2 = 135$	Yellow to slightly reddish liquid Sp. Gr. 1.690	55-gal. drums containing 700 lbs. and tank cars.
Trichlorobenzene 1:2:4 $C_6H_3Cl_3 = 181.5$	Clear, colorless mobile liquid. Sp. Gr. 1.4650. B P 213.5° C.	1-gal. cans containing 12 lbs. 5-gal. cans containing 60 lbs. 55-gal. drums containing 650 lbs.

For additional information of the Chemicals shown, or for a complete list of HOOKER chemicals, write Dept. S-3.



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# HOOKER CHEMICALS



Ⓢ 4857

as it may from time to time deem proper for the protection, advancement and mutual interest of its members."

For 30 years, information has been continuously collected and sent promptly to all members. A complete list would reveal an enormous total of value to the industry. Even though the membership of N.A.I.D.M. is comparatively small in numbers, it really serves an entire industry of close to 2,000 firms who benefit both directly and indirectly through the work undertaken. Many of these 2,000 firms are small and might not be able individually to keep in touch with the constant changes, numerous developments and ramifications of this growing industry. For example, one of the important activities of N.A.I.D.M., one which has proved beneficial to members and non-members alike, is the work of our legislative committee. It has on many occasions opposed the enactment of legislation which would have put an unbearable burden on all firms in the industry. It has promoted legislation beneficial alike to the public interest and to the industry at large. This activity,—this eternal vigilance that takes time and costs real money—goes on, not only in connection with federal legislative proposals, but in each of the 48 states, and in some municipalities. N.A.I.D.M. has in effect been a legislative "watch-dog" for the entire 2,000 firms comprising the general sanitary chemical industry of the country.

The association has for years championed the development of scientific tests designed to permit comparative evaluation and quality standardization of disinfectants and insecticides. The "phenol coefficient," now so widely accepted as a measure of disinfectant value, has been the subject of much work on the part of scientific committees of N.A.I.D.M. over the past 25 years. The adoption of various commercial standards for insecticides and disinfectants since 1938, with revisions as conditions have changed, was brought about by N.A.I.D.M. committees working closely with departments of the U. S. government. These commercial standards are helpful to all reputable firms within the industry and to every buyer and consumer.

It is significant that these commercial standards have been accepted by manufacturers, distributors, and users, — and are another factor helping to create confidence in our products. They have enabled industrial and institutional buyers to purchase merchandise of *known* quality. These standards cover such items as hypochlorite disinfectant, pine oil disinfectant, coal-tar disinfectants, cresylic disinfectant, household liquid spray insecticide, etc.

Scientific investigations of a co-operative character with a view toward establishment of additional quality standards are now being carried on,—and have been carried on for several years past,—in the field of moth-proofing products, animal insect sprays, etc. Testing procedure against crawling insects, value and suitability of new disinfectant materials, revision and co-ordination of chemical methods in insecticide analysis, occurrence of common disease organisms in public places and their control as an aid in preventing the spread of disease, study of floor wax testing and evaluating durability and non-slip safety factors, cooperation with government agencies, including the armed forces, in the development and standardization of products for disinfection and insect control,—these are a few of many projects undertaken by N.A.I.D.M. during the past few years. Over the past ten years, N.A.I.D.M. has financed and cooperated in a half-dozen fellowships at American universities investigating problems and matters of interest to the entire industry, and in each case, the findings have been published and made available to all.

More recently, N.A.I.D.M. has instituted a small campaign of co-operative advertising in the institutional and industrial fields through leading trade publications going to hospitals, dairy and other food processing establishments, factories, hotels, and institutions. The aim of this co-operative advertising is to expand the demand for insecticides, disinfectants, and other sanitary chemical products, particularly for products of higher quality and greater efficiency, and to make the consumer conscious of the importance of

the products of our industry as adjuncts in maintaining sanitary conditions. Although the cost of this advertising is being borne by the membership of N.A.I.D.M., its benefits accrue to the entire industry. The advertisements have been appearing for the past six months and will continue over the next several months.

Many more examples could be cited of what N.A.I.D.M. is doing to promote and protect the interests of the industry, and to advance its general welfare. Its accomplishments over the past quarter-century could easily fill several volumes. In fact, hardly a day goes by, or has gone by, but some problem affecting the industry comes to the attention of N.A.I.D.M., is examined and proper action taken.

Our industry is engaged in the manufacture and distribution of products designed to aid in furthering sanitation, preventing disease and protecting the health of the community, whether that community be a factory in a large city, a suburban home, a milk barn on the farm, a hospital, or what not,—a job more important and vital today than ever before. N.A.I.D.M. has aimed constantly to place these products of ours, and our industry as well, on a higher scale, and to emphasize in the mind of the consumer their importance. Not only has N.A.I.D.M. lived up to the purposes for which it was founded in 1914, but through the years, it has greatly expanded the scope of its activities both in the interests of the industry and the general public also,—and it will probably continue to expand further its aims and accomplishments as time goes on.

Yam bean seed was widely used as an insecticide in Western China during 1942. This bean is grown in the tropical world for the food value of its tuber-like root. It is cultivated in Mexico, and Central America, West Indian Islands, Brazil and other South American countries. The seed apparently contains only small concentrations of rotenone, so that the toxic material is probably not primarily this compound. R. Hansberry and C. Lee. *J. Econ. Entomol.* 36, 351-2.

# Research in Red, White and Blue



Far flung . . . far spread . . . the power of American war effort becomes increasingly evident, particularly to the enemy. Our men in arms, our nation, all are involved in what may be termed a "global form of research" . . . It is a grim research . . . a determined research for a better world . . . for a new symbol, a step further, toward the formula which for the greater part, has escaped humanity.

It is impossible to parallel the domestic problems of supply and demand . . . of unavailable materials . . . of substitutes . . . even of little sacrifices, with the supreme effort of those who are actually in the fight. It is, however, possible and necessary to extend our every effort, as a nation, as an industry, to maintain standards and essentials while the greater research in Red, White and Blue proceeds.

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In our industry of essential oils, reproductions and synthetics, continuous research — always a vital phase of the FLORASYNTH pattern — now intensified by external conditions — has enabled us to create and offer many "Substitutes for Substitutes", materials which are establishing new qualities, new effectiveness as *primary essentials* . . . proved under the difficult and trying circumstances of the times.



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# ENTOMOPHOBIA...

imaginary insect infestations occasionally give the pest control operator trying problems . . . symposiums on the subject at recent PCO conferences were followed with much interest . . . the following article is based on notes of the discussions prepared by two of the participants.

*George R. Elliott*

*Ransford Insecticide Co.*

PEST control operators, in the course of their operations, encounter numerous complaints of bodily irritations which are assumed to be due to insects. Although the symptoms may be much the same, it must be borne in mind that there are many possible causes, some real, some imaginary, of the irritations reported. Among recognized causes are:

- (I) Irritations brought about by tangible insects or manifestations of disease
  - A. Actual insects
  - B. Fungoides
  - C. Arthritics
  - D. Diabetics
  - E. Drugs
  - F. Allergy
  - G. Skin diseases
    - 1. Ichthyosis
    - 2. Hypo-thyroidism
- (II) Irritations from imaginary (not real or tangible) causes
  - A. Drugs
  - B. Allergy
  - C. Stimulation from having seen a repulsive sight of actual insects
  - D. Suggestion

The immediate function of the PCO is to establish the presence and identity of actual insects, or their absence. There may be fleas, lice, mites, thrips, gnats, or others. Insects which do not actually bite may, by their mere

presence, produce the same general reaction. Except for some of the mites, most insects likely to be involved are large enough to be seen with reasonable scrutiny. PCO's employ various devices, such as white cloth or sticky flypaper, to lure specimens. Eradication is a routine matter.

If no insect life is present, the problem becomes one for the physician or the psychiatrist. The PCO retains only the important responsibility of persuading the sufferer to enlist proper medical attention.

Not uncommonly the cases prove to be mental disturbances classified as hallucinations. They differ, however, from the type of hallucination most familiar to mental specialists, in that the latter are usually visual or auditory, whereas those we are concerned with are tactile, having to do with the sense of touch. A PCO and a medical entomologist, respectively, have suggested the terms "insectophobia" and "entomophobia," literally "fear of insects," as descriptive of the ailment. Women are the principal sufferers, to the extent of about 80 per cent, in cases reported.

Not to be confused with hallucinations are the rather common instances of mass irritation, such as among workers in stores, factories, and offices, where multiple "biting" is alleged, but no insects found. Such cases would be more accurately ex-

plained as mass hysteria, induced by suggestion or imitation. In such situations, relief has frequently been effected by resort to superficial disinfecting treatment or fumigation.

Where the problem is mental, the layman is not qualified to attempt treatment. The "insects" and their damage remain most real to the sufferer. To argue otherwise is futile; and serves only to fix the hallucination. The victim will no more recognize the need of going to a mental specialist than you would, if he insisted that you go. Above all, the PCO should not ridicule, but should exercise sympathy, patience, and tact. A helpful word to remember in this connection is "explain." Stress that the doctor can "explain" the condition; there is seldom objection or resentment to the idea of having something "explained."

The patient may be in need of a complete neuro-psychiatric check-up and examination. A number of the cases reported have eventually gone to mental institutions.

Inquiries conducted in connection with the Eastern and Purdue PCO Conference, representing some 225 pest control operators, indicate (1) that practically every PCO has encountered cases of the type under discussion, (2) that such cases are apparently on the increase. Incidentally, these PCO groups described more personal knowledge cases than are to be found reported in entomological and medical literature combined.

Here is an intriguing field for useful research, an opportunity for teamwork in the part of the pest control operator, the medical entomologist, the dermatologist, and the psychiatrist.

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During the past five years LETHANE 384 SPECIAL has been used annually in millions of gallons of household and industrial sprays. It provides fast-killing sprays which are clear, non-staining, mild in odor and low in cost.

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## Robert E. Hackley

THERE are times when it is difficult to distinguish between a mental case and a real insect trouble. We should be careful to avoid confusing the case of the habitual kicker or the merely finicky person with the one who is a person with a definitely abnormal mental state dominating him. Professor W. B. Herms of the University of California reports a number of disturbed mental cases involving supposed insects brought to him. He speaks of such manifestations as "Entomophobia," literally, fear of insects.

When cases of entomophobia come to a pest control operator, he should remember that he is dealing with a sick person. Sickness is not funny and the operator should listen patiently and sympathetically. If it appears that a show of treatment will bring some satisfaction and the family consents to it, it may be a help to put on a show, using preferably somewhat elaborate equipment and a material with an odor suggestive of disinfectants. Obviously all such cases should be held in the strictest confidence. If there is a doctor in attendance, he should be consulted.

The following are typical examples of cases with which the writer has had direct personal experience.

Case 1. A woman in middle life complained to the Health Office of bugs infesting her home and being especially annoying near a garden gate. Upon visiting premises, with the health officer, and interviewing the woman, I could find no insects that could be causing any substantial difficulty. The woman was very much in earnest about the annoyance she was suffering but very inaccurate in her description of the insect supposed to be causing the trouble. There was nothing that could be done to help the situation and I heard nothing more from the case for a long time. Some years later it was reported that the woman was being cared for in a mental institution.

Case 2. A woman came to me and complained of being bitten by in-

sects, showing a small red spot on her arm as one of the bites. The spot was about a sixteenth of an inch in diameter and was not raised as a pimple would be or as it would likely be if it resulted from a bite. Upon going to her house she pointed out various places from which the insects descended upon her and said they were prevalent all about the house. She had previously been to see various health authorities and showed me a pamphlet relating to the rat mite, some official having suggested that this might be the cause of her trouble. She found for me various specimens which she presented as samples of the insects. This was after I failed to see any of the insects which she was trying to point out to me. These specimens consisted of various kinds of material such as may be picked up behind furniture or in corners not thoroughly swept and dusted. No sample was an insect.

I advised her that there was practically nothing needing to be done and that in all probability the trouble would disappear after a time. She returned and insisted that the house be fumigated. I warned of the expense and futility of the process and suggested she spray the worst spots with fly spray herself. Dropping in later to see how things were going, I found her busily spraying the outside cellar stairs where cobwebs, dirt, and various other things presented a semblance of an insect haven. I encouraged her to believe that if there were any insects present, they would be killed by the spraying. Since she was under the care of a doctor, I telephoned him saying I did not think she was really troubled by insects. He agreed with me. Later on she told me she had had the place fumigated. It is reported that she suffers from or gives evidence of having a mental difficulty.

Case 3. In this case a woman about 70 years old suffered a stroke that impaired her speech severely. She was confined to the bed and was under

the care of a physician, and had every attention that could be wished for, yet she complained of "big bugs" vigorously, gesticulating to show how they swarmed about her and where they were. The family asked me to do something to satisfy her. With the understanding of the family that I expected to kill no bugs and that the difficulty was purely a mental condition, I sprayed her room thoroughly with sheepdip, diluted so as to leave plenty of odor without making stains.

When I came to her chair with removable covers tied upon the arms, she smiled with great satisfaction; I seemed to be hitting one of the important spots. While taking down the pictures from the walls and spraying their backs, I talked to her pleasantly about the members of the family and she seemed quite pleased. When about to leave she made energetic motions toward the door, so I asked, "Do some bugs come in by the door?" She nodded, "Yes," most emphatically, so I told her I would spray the outside of the door carefully when I went out. This pleased her. The family was satisfied and has since told me that there had been very little difficulty with the supposed insects following the treatment.

### Killing Body Lice

For fumigation of clothing to kill lice infestations in the U. S. Army, methyl bromide is the only compound tested which required a short exposure period. It is effective at relatively low temperatures and leaves no objectionable odor in treated clothing. It does not injure fabrics or equipment. Fumigated clothing can be worn immediately after treatment without skin irritation or danger from inhalation.

A light-weight, demountable vault for use at army bases, and an individual fumigation bag for treating one soldier's uniform and blankets, are described. The bag is made of fabric coated with ethyl-cellulose or "Neoprene." Glass ampoules containing methyl bromide in protective cloth cases are used to charge the bags with the lethal gas. R. Latta and A. H. Yeomans. *J. Econ. Entomol.* 36, 402-4.



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*Powdered Hand Soap*

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.. the Army  
Tests its New  
Insecticides



Every effort is being made by the government to expand production of DDT which has proved in test procedure to be the most effective insecticidal ingredient for use by the military forces against body lice. Photos just released by the U. S. Department of Agriculture show test methods as well as actual application in the field. (Above) patch tests against laboratory animals gave DDT a clean bill of health, indicating it to be non-allergic to the skin of prospective users. (Left) An actual application of the powder is made in the field. (Below) Mattresses are sprayed with a liquid insecticide based on DDT for control of bedbugs in barracks.





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INSECTICIDES  
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ETC.**

Please mail your orders and inquiries to our new address  
where your needs will receive our prompt attention.

**THE CHEMICAL SUPPLY COMPANY**  
CLEVELAND, OHIO

"SINCE 1898"



# Disinfectant Testing Errors

LACK of uniformity in the designated beef extract and peptone for use in the F.D.A. method of disinfectant testing is responsible for considerable variation in test results, Dr. Burton G. Philbrick, Skinner & Sherman, Inc., Boston, told members of the National Association of Insecticide & Disinfectant Manufacturers at their recent annual meeting in New York. The NAIDM has been constantly working to get a uniform peptone by having members of its Disinfectant Committee test each batch of disinfectant peptone before it is offered for sale. This procedure has not been entirely successful, as the batches vary greatly and often the supply of tested material is low if not entirely lacking. Nevertheless, by this procedure peptones have been procured which have enabled testing laboratories to keep these test organisms up to their proper resistance. Under present conditions, "Lemco," the designated beef extract, is off the market and "Bacto-Beef" ex-

tract has been substituted in most laboratories.

Since it is very evident that a strict adherence to the F.D.A. formula for culture broth is at present impossible, impetus has been given to search for a synthetic medium which can be made of uniform composition without the variables of a beef extract and a peptone, which are not made primarily for bacteriological use.

The Skinner & Sherman laboratory, Mr. Philbrick reported, has been running tests for about a year on a dehydrated medium and has found it very satisfactory for use with *E. typhi*. It is not yet adjusted to use for *Staph. aureus*. The American Public Health Association now has a subcommittee working along this same line and should have some interesting data within a year. Efforts are continuing to work out methods of test which will be acceptable to health authorities, the government and disinfectant manufacturers.

## Antiseptic Power

Benzoic acid, salicylic acid, and sulfurous acid are nearly a hundred times as efficient antiseptics in strongly acid solution as they are in neutral solution. With benzoic and salicylic acids, only the undissociated acid is antiseptic. Sulfur dioxide in water dissociates to harmless  $\text{SO}_3^-$  ions, and to  $\text{HSO}_3^-$  ions, which inhibit the multiplication of *Bacterium coli* but not of yeast. The yeast is inhibited only by undissociated sulfurous acid. The rapid death of yeast is brought about by 7-8 mg. of undissociated sulfurous acid per 100 ml.; *Bacterium coli* can tolerate nearly ten times as much. O. Rahn and J. E. Conn., *Ind. Eng. Chem.* 36, 185-7 (1944).

## Action of Disinfectants

It has been suggested by D. P. Evans and A. G. Fishburn of Cardiff Technical College that the mechanism of the action of disinfectants such as phenol on a bacterium takes place in two stages, a simple solution of the

bactericide in the outer layer of the micro-organism, followed by coagulation of the protein in this region. Suspension of bacteria in liquids may be regarded as colloidal systems and sorption would be expected to occur at the bacterium-liquid interface.

These investigators tentatively suggest that the mechanism of disinfection by water-soluble bactericides consists of two stages, sorption on the surface of the organism, followed by chemical reaction between sorbed disinfectant and the protein in the surface layer of the bacterium. When sufficient of this protein has been precipitated, the organism is unable to carry out the process of reproduction and is considered dead.

To study this theory, the investigators used charcoal to represent bacteria, and various phenolic disinfectants. They found that for any given concentration of disinfectant below 1 per cent, the order of the weights of bactericide sorbed per gram of charcoal, was roughly directly pro-

portional to increase in bactericidal power as measured by the Rideal-Walker test. This increasing order of activity was as follows: Phenol, *ortho*-cresol, *meta*-cresol, 3, 5-xyleneol, 2, 6-xyleneol, *para*-cresol, 3, 4-xyleneol, 2, 4-xyleneol, chlorocresol.

*Para*-Cresol was sorbed to a lesser extent than phenol but the rate of kill is the same for 1 per cent of phenol as for 0.4 per cent of *para*-cresol. This indicates that in the chemical reaction between *para*-cresol and the micro-organism, *para*-cresol is more reactive than phenol. The influence of *para*-substituted chlorine is much greater than that of the *para*-substituted methyl radical. The work is being extended. *Chem. Age* 49,293 (1943).

## New Synthetic Roach Powder

For the manufacture of roach powders, particularly as a substitute for pyrethrum in non-poisonous powders, Rohm & Haas Co., Philadelphia, has announced Lethane A-70 which is stated to be "based on beta beta' dithiocyno diethyl ether." The new material is stated by the company to be designed as the insecticidal toxicant in roach powders, that it has proved as deadly as pyrethrum in roach control, and that it is expected to go a long way in replacing present war-restricted supplies of pyrethrum.

Rohm & Haas Co. outlined some of the properties of Lethane A-70 in a recent announcement. They state that Lethanes heretofore widely used in liquid sprays of various types, are now ready to find wider use in powdered insecticide products. In laboratory tests, roach powders based on the new material lost none of their toxic strength over a period of five weeks at room temperatures. The material is stated to have shown an equal ability to pyrethrum of 1 per cent pyrethrins in speed and kill on roaches, and that it has shown greater speed and an equal kill when compared with sodium fluoride.

Reported tests indicate that the new powders are of a low order of toxicity to warm-blooded animals. In terms of rough comparison, it is said to be about one-fifth as toxic as derris or cube roots.

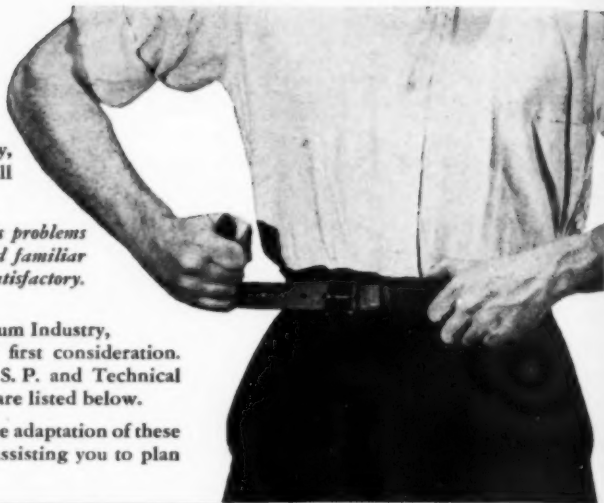
## as we tighten our belts . . .

Cheerfully—eagerly, because it's our contribution to Victory, all of us have accepted the fact that for the duration, we will have to tighten our belts and "do without."

*But typical American know-how is licking many of Industry's problems created by all-out war. We are discovering how available and familiar materials can be put to work on new uses—with results amazingly satisfactory.*

Along with every refinery and plant in the American Petroleum Industry, we are making Government cooperation for Victory our first consideration. However, we are still able to supply quantities of our U. S. P. and Technical White Mineral Oils and U. S. P. Petrolatums. Some of them are listed below.

Equally important, we can be helpful in exploring with you the adaptation of these materials to the solution of your present problems and in assisting you to plan for peacetime production.



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CARNATION    KLEAROL

### PETROLATUMS U. S. P.

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- ★ **NAPHTHALENE**—Crude and refined prime white Naphthalene, in chipped, crystal, flake and powdered form. In 250-lb. barrels and 50-lb. fiber drums.
- ★ **CRESYLIC ACIDS**—Reilly produces the entire range of Cresylic Acids—in standard grades or to buyers' specifications.
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17 PLANTS To Serve the Nation

## QUATERNARY AMMONIUM DISINFECTANTS

(From Page 99)

ammoniums are in themselves wetting agents. Furthermore, they are compatible with detergents other than soaps—for example, trisodium phosphate and certain synthetic wetting agents which do not act as electrolytes when dissolved in water. The quaternary ammoniums are germicidally active throughout a wide pH range. The pure compounds themselves produce an acid solution when dissolved in water, but can be made neutral or alkaline with soda ash or caustic without loss of stability or activity.

Some of the Navy's applications for this type of disinfectant are given in their specifications as follows:

1. General disinfecting uses.
2. Disinfecting surgical instruments.
3. Disinfecting gas masks and other personal equipment.
4. Disinfecting clothing prior to laundering.
5. Disinfecting washrooms and toilets.
6. Anti-fungal uses.
7. For use with specified detergents for cleaning.

The action of bactericides is, of course, a very complex field. With an entirely new type of bactericide such as this, there is obvious room for an innumerable number of questions of problems relating to their effectiveness, conditions of use, compatibility with other products, etc. Some of these have been discussed in publications by Rawlins, Sweet and Joslyn\* and Joslyn, Yaw and Rawlins.† As far as general use in industry is concerned, this information is only gradually being acquired and is not yet complete.

\* Journal of the American Pharmaceutical Association, Vol. XXXII, No. 1, Jan., 1943.

† Journal of the American Pharmaceutical Association, Vol. XXXII, No. 2, Feb., 1943.

### Fumigants for Bedbugs

Some 26 compounds were tested for their efficiency as fumigants against the eggs, nymphs and adult bedbugs. The following compounds were toxic in decreasing order: Hydrocyanic acid, acrylonitrile and its 1:1 mixture with carbon tetrachloride, chloroacetonitrile, chloropicrin, *alpha*, *beta*-dichloroethyl

ether, 1,1-dichloro-1-nitroethane, methyl bromide, dichloroacetonitrile, trichloroaceto-nitrile, ethylene oxide.

Addition of carbon tetrachloride to acrylonitrile produced a non-inflammable mixture which was more toxic than acrylonitrile alone. Chloropicrin was more effective against the eggs than against the older nymphs and adults. Henry H. Richardson. *J. Econ. Entomol.* 36, 420-6.

### New Disinfectant

A new disinfectant called "Desogen" belongs to the quaternary ammonium compounds. A 2 per cent solution in 70 per cent alcohol was just as effective against hemolytic streptococci and pneumococci as tincture of iodine. Contaminated instruments were sterilized by boiling in a 2 per cent solution of the compound in 15 minutes and disinfected in 60 minutes. A. Grumbach. *Schweiz. med. Wochschr.* 71, 1520-6; through *Chem. Abs.*

### Penetration of Packages

The ability of various insects to penetrate packages is the subject of a paper in the December, 1943 issue of the *Journal of Economic Entomology* by E. O. Essig, W. M. Hoskins, E. G. Linsley, A. E. Michelbacher and R. F. Smith of the University of California. Various packaging materials were tested to determine their ability to resist penetration by various common insects. On the basis of their preliminary studies the authors of this paper reached the following conclusions:

1. With some insects penetrations of package materials permeable to odors is apparently favored by the presence of food.

2. Those insects with propensity for boring are apparently the best penetrators of packaging materials.
3. At least one stage of each of the common stored food pests, except the saw-toothed grain beetle, was able to penetrate some of the materials tested.
4. None of the commercially used metal-substitute packaging materials tested is strictly insect-proof. An abrasive paper is still under test.
5. The most promising type of material thus far tested was a heavy cardboard carton double-dipped in a thermoplastic material.
6. Among the more promising transparent cellulose materials are such products as *Thermophane* A and *Cellophane* 600. However, these materials are only relatively more resistant to penetration than most light weight materials tested.
7. Laminated *Kraft*-asphalt-leadfoil-cellophane bags showed little resistance to insect penetration.
8. Among the multiwall bags the *Bemis* bag was the most promising. However, it was readily penetrated by the cadelle.
9. Manufacturing techniques are needed which will produce uniform containers without roughened spots, creases, folds, and similar areas where insects penetrate most easily.
10. Repellents offer a possible solution to the problem of keeping insects out of packaged food. Toxicity is shown by many compounds, especially phenol derivatives, and the effects due to repellency are thereby obscured.

### PLANS FOR N.A.I.D.M. PROGRAM

THE revolutionary character of new developments in the field of disinfectants, insecticides and allied sanitation products is directing plans for the program of the 30th mid-year meeting of the National Association of Insecticide & Disinfectant Manufacturers to be held at the Edgewater Beach Hotel, Chicago, June 12 and 13, according to John Powell, chairman of the Program Committee. The two-day program, already close to completion, will include papers and discussions on D.D.T., aerosol versus regular liquid insect sprays, quaternary ammonium disinfectants, safety in floor finishes, symposium on insecticide sprayers, and others.



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### Mercurials as Bactericides

Reports of the bactericidal effectiveness of mercury preparations do not seem to be in harmony, due mainly to the misinterpretation of reported results, and the lack of a suitable *in vitro* test for their evaluation. The known mercurials possess high bacteriostatic properties, and as a result, tend to give falsely high phenol coefficient values.

Results were compared on the bactericidal activity of various mercurial preparations using (1) the Shippen retransfer technique to at least four loopfuls from the first subculture to a second tube of broth; (2) 100 cc. of plain broth for subculture; and (3) a thioglycollate medium for subculture. The results indicate the advisability of using a "neutralizing" medium such as thioglycollate medium as a subculture for determining *in vitro* bactericidal dilutions of mercurial preparations. The other two methods gave falsely high-killing dilutions in several instances. Bernard Heinemann. *J. Am. Pharmaceutical Assoc., Sci. Ed.* 32, 298-301 (1943).

### Air Sterilization

Fighting epidemics of influenza and other air-borne diseases by chemical sterilization of the air seems nearer to practical application as a result of studies reported by B. H. Jennings and E. Bigg of Chicago.

Triethylene glycol vapor can instantaneously kill all the bacteria in the air of a room of 10,000 cubic feet capacity. The ability of this chemical to sterilize the air has previously been shown in small experimental chambers. The new studies show that it can be used in rooms of classroom or hospital-ward size, or in offices in which a number of people work. Whether sterilizing the air in this way will keep infections from spreading has yet to be determined, but experiments so far are said to "leave little doubt that this will be the case."

The triethylene glycol was used in the form of a vapor. This vapor distributed itself readily throughout the room, in a manner similar to water vapor. Fans aided in a more rapid and uniform distribution. Maximum kill-

ing effect on the bacteria is obtained with a relative humidity of 35-40 per cent. One device used to generate the glycol uses the principle of atomization and can be incorporated into the pre-existing duct systems of air conditioning units. Another device generates the vapor by heating a solution of the chemical.

The rate and concentration of the vapor generated must be determined by the number of air exchanges in the room air. For practical use, an instrument must be developed to control operation of the generator, starting and stopping it as the concentration of the glycol in the air changes, somewhat as a thermostat regulates a furnace. *Science* 98, October 15, 1943.

### Mothproofing Wool

A mothproofing compound suitable for use on felt is dinitro-ortho-cresol, which can be applied in a concentration of 0.025 per cent. This proofing is removed by washing. Many of the fluorine-containing mothproofing agents are not fast to washing, but one which is stated to be unaffected by repeated washing is made as follows: triethanolamine is run into fluosilicic acid with the latter in slight excess. Aluminum sulfate is added to the clear solution, followed by a wetting agent of the sulfated alcohol type. This solution is diluted and applied to wool so as to give an addition of 0.1-1.0 per cent of solids. R. S. Hartley, F. F. Elsworth and J. Barritt. *J. Soc. Dyers & Colourists* 59, 266-71 (1943).

### Plant Insecticide

A spray material for controlling plant pests is made by emulsifying a light mineral oil having an Engler viscosity of 1.13 at 20° C. and boiling at 164-284° C., with an emulsifier at 7500 r.p.m. The emulsifier contains 10 per cent of Turkey-red oil used in a ratio of 2 per cent based on the amount of mineral oil. Two kilograms of this emulsion are mixed with 100 liters of water. To this is added 120-50 grams of a nicotine preparation or 500 grams of pyrethrum. The preparation is good for winter spraying. I. Spiess. German Patent No. 725,300.

### Sweat as Bactericide

It having been shown that sweat may have some fungicidal properties, investigators continued the study of the antibacterial action of lactic and the volatile fatty acids of perspiration, and reported their results in the *American Journal of Medical Science*. Subjects were encased in rubber bags and put in heat cabinets to induce sweating.

It was found that perspiration as secreted contained lactic acid in amounts sufficient to give it some bactericidal action. Evaporation on the skin increases the lactic acid concentration and makes for greater bactericidal activity. The concentration must be such as to give a pH of 5.3 or lower for the lactic acid to have much effect. The volatile fatty acids present appear to be formed by bacterial action on the lactic acid, and are present in smaller amounts than lactic acid. They are relatively more effective in the pH range of 5.3 to 6.2, and may extend the antiseptic action of perspiration over the regions of the skin where this pH range prevails.

### New Bactericide Reported

A new bactericidal substance named patulin has been reported in the British medical journal *Lancet*. The material is isolated from the mould *Penicillium patulum*, and has been obtained in crystalline form. It differs from penicillin and similar mould products in that it shows no selective differentiation between gram-positive and gram-negative microbes. Patulin is very much less active than is penicillin against gram-positive organisms, but the position is reversed for gram-negative organisms of the colic-typhoid-dysentery groups. Investigations are being carried out to determine the efficiency of patulin in the treatment of the common cold. These show promise but are as yet incomplete. *Can. Chem. & Process Inds.* 27, 716 (1943).

### Additive to Pyrethrum

An insecticide contains pyrethrum extractives as its toxic ingredient, and fenchyl chloroacetate to enhance the toxicity of the pyrethrum. F. M. Thompson, to Hercules Powder Co. Canadian Patent No. 415,905.

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## POTASH SOAP QUESTIONS

(From Page 31)

industrial requirements will be taken care of.

Distilled red oil, which is what you are most interested in, will still be subject to allocation, and I suggest that you continue to file your requests every month on the chance that you will be able to get it. There is no way of our telling you in advance of the allocation whether or not you will be able to get it. One of the largest uses of red oil has been in incendiary bombs, and nobody knows how much of that sort of thing we will need.

### XII. Outlook for Additional Allotments of Coconut and Palm Oils

**Question:** What is the prospect of increased allotments of coconut and palm oils?

**Dr. Lentz:** I think we will probably continue coconut oil allotments at the same rate we put it out this quarter. We are doing our very best to get more in. We do not have any intention of increasing the stocks of coconut oil so that any brought in will be distributed. Our present distribution, which has just been completed, amounted to approximately 45 million pounds of coconut oil and we expect to have that much available in the next quarter. The story on palm oil is entirely different. We are having considerable difficulty getting in any at all. The amount available for the soap kettle is quite small. There is not much prospect of increasing it. It is entirely a matter of shipping. Where boats are going to the theaters of war, we have plenty of shipping coming back available to bring in fats and oils. They will not give us shipping to go to out-of-the-way places such as the Belgian Congo where palm oil is. The little palm oil we do get is really brought in because we insist that we have to have it for the steel business. We do bring in enough, however, so that the soap kettle gets a little bit of it.

### XIII. Next Coconut Oil Allotment Expected in April or May

**Question:** In view of the recent exemption of 150,000 pounds of whole oils from glycerine recovery would it be possible to revise the allocation system so that potash soapmakers will not have to wait until May to get the benefit of the exemption?

**Dr. Lentz:** Presumably you already have asked for an allotment of coconut oil for this quarter. If you got a six months' supply last September or October then all you would have to do is to ask for permission to use what you have left without

recovering the glycerine. If you did not get any coconut oil in September or January, then you must wait until April or May, whenever it arrives.

### XIV. Carryover of Unused Exemption of Oils from Glycerine Recovery from One Quarter to Another May Be Permitted

**Question:** We are permitted under FDO-33 to use 150,000 pounds of neutral oil in a quarter. A number of us are carrying stocks of fatty acids that make it impractical to take advantage of this exemption at the present time. Under the circumstances, can we carry over from one quarter to another this permitted usage or exemption of neutral oils so that those who are in the position mentioned will be able to get the full benefit from the 150,000 pound exemption from glycerine recovery?

**Dr. Lentz:** Under the order as now written, it is not possible for you to do as you suggest. There are, however, two ways of handling the matter in order to do what you have in mind. One is for us to amend the order and the other is to handle it by appeal, which amounts to amending the order for each person. I don't know which is the hardest job for us. Frequently we can get through 200 to 300 appeals in less time than it takes to put through an amendment. We will be glad to give this matter consideration.

### XV. Procedure for Appeals to Carry Over Unused Exemption from Glycerine Recovery

**Question:** Will you please explain to the group just how they should go about requesting the privilege of accumulating their exemption until they are in position to take advantage of it?

**Dr. Lentz:** The companies can write us a letter pointing out that under existing orders they have prepared for the use of fatty acids, that their storage facilities are all taken up with fatty acids and that they simply cannot take advantage of the 150,000 pound exemption until they have the facilities for taking in whole oils. Others may have different reasons. Any good reason will be considered by us.

### XVI. Small Soapmakers Who Use More Than 150,000 Pounds of Fats and Oils Quarterly May Obtain Exemption from Glycerine Recovery

**Question:** How do you feel about exempting from glycerine recovery altogether small soapmakers who use a little more than 150,000 pounds of fats and oils in a quarter, who do not have glycerine recovery facilities, and who, for example, were using oils other than linseed or castor?

**Dr. Lentz:** Small companies that are not too far over the line can write us and ask for an exemption.

If they do not ask for too much above the 150,000 pounds, we probably will extend them the relief they request.

### XVII. Yardstick Used in Fixing Quarterly Exemption of Fats and Oils from Glycerine Recovery

**Question:** Can you give us some indication as to how the 150,000-pound exemption from glycerine recovery was arrived at; what yardstick was used in your effort to assist the small soapmaker?

**Dr. Lentz:** We took the glycerine recovery reports for four months, tabulated them and struck a balance between the amount of glycerine that would be lost and the number of companies involved. We estimated that if everyone took advantage of the 150,000-pound exemption of neutral oils from glycerine recovery in a quarter, approximately 2½ per cent of the glycerine would be lost and something over 50 per cent of the companies in the industry would be exempt from glycerine recovery. That is 50 per cent of those who had been recovering glycerine. There are still about 100 companies that use less than 10,000 pounds of fats and oils in a month under the old order, and they, of course, were taken care of then and will be taken care of under the larger exemption. We end up with about 75 per cent of the soap companies excused from glycerine recovery requirements entirely. That seemed to us to be a good breakdown. When we raised the quantity to a higher figure than 150,000 pounds in a quarter, we then started to take too many of the larger companies who are equipped to, and always have, recovered glycerine. That is how we arrived at the 150,000-pound per quarter exemption.

### XVIII. Restrictions on Use of Carryover of Unused Fats Quota Under FDO-42

**Question:** Can the carryover of unused quota under FDO-42 from one quarter to another be continued from quarter to quarter?

**Dr. Lentz:** You may carry over from this quarter to the second quarter any unused quota in the first quarter, but you cannot use the carryover from the first quarter in the second quarter until you have used up all of your quota for the second quarter. Under this rule you cannot possibly have any carryover from the second quarter into the third quarter nor can you have any carryover from the first to the third quarter.

### XIX. Pine Oil Is Controlled by WPB

**Question:** Is there any assistance the Soap and Glycerine Division can give in helping companies to get pine oil?

**Dr. Lentz:** I don't think there is. We tried, in a few instances, but have not been successful. Pine Oil is

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# SOAPS

not under our control and the companies have to make their applications to WPB.

#### Insecticide Toxicity Studies

Various materials were tested as dips against eggs of the housefly and the Angoumois grain moth. Against housefly eggs 1½ to 5 hours old suspensions of derris powder, derris extract, or rotenone were found to be the most effective. The pyrethrins, anabasine, nicotine and nicotine compounds, petroleum oil, and other materials tested showed little toxicity. Nicotine showed greater efficiency against very young eggs, 1 to 2 hours old. Pyridine, pine oil, oil derived from the dry distillation of various plants, and a lauryl thiocyanate mixture were effective in covered petri dishes, an indication of a fumigating action. Derris powder apparently contained water-soluble materials toxic to the eggs in addition to the small quantities of soluble rotenone. "Toxicity of Derris, Nicotine, and Other Insecticides to Eggs of the Housefly and the Angoumois Grain Moth," by Henry H. Richardson, U.S.D.A., *Journal of Economic Entomology*, Vol. 36, No. 5, 729-731.

#### Cattle Louse Control

Substitutes for rotenone in cattle louse control are discussed by J. G. Matthyse and H. H. Schwardt of Cornell University, in an article in the *Journal of Economic Entomology*, Vol. 36, No. 5, p. 718-720. In normal times the usual treatment is a dust composed of one part of cube or derris (5 per cent rotenone) to 10 parts of wettable sulfur. Since rotenone is currently in very short supply, substitutes have been sought. The best replacement found is composed of 1 part finely ground sabadilla seed to 10 parts wettable sulfur. This can be relied on to control all species of cattle lice. Ground yam bean seed, 1 part to 10 parts wettable sulfur, was also found to be very effective. *Thanite* and *Lethane*, at 1 part to 10 parts of carrier, reduced infestations but could not be relied on for good control. Nicotine, hellebore, and pyrethrum were found to be ineffective under the conditions and concentrations of the experiments.

#### Book on Pyrethrum Substitutes

"Synthetic Organic Compounds Patented for use as Substitutes for Pyrethrum" is the title of a 293-page mimeographed volume issued as of February, 1944, by the Division of Insecticide Investigations, Bureau of Entomology and Plant Quarantine, U. S. Department of Agriculture. The work was compiled by C. V. Bowen and L. E. Smith of the Division of Insecticide Investigations of which Dr. R. C. Roark is chief. The book covers 77 U. S. Patents for chemical insecticide materials designed for pyrethrum substitutes or supplements. Structural chemical formulas with a brief resume of properties and results of tests are given. This published summary representing a number of years work by the authors and others of the Division is an invaluable addition to the insecticide literature. Further information may be obtained by insecticide manufacturers by communicating directly with the Division of Insecticide Investigations, Beltsville, Md.

#### Rotenone Decomposition

Experiments were made with spray materials containing rotenone in order to study the oxidation-reduction decomposition induced by the atmosphere and the photodecomposition induced by light. The results showed that hydroquinone afforded considerable protection against oxidation. The solutions exposed to light all showed deterioration. The results emphasize the need for protecting rotenone and similar compounds in sprays from exposure to light, air and high temperatures. F. A. Gunther. *J. Econ. Entomol.* 36, 273-81.

#### Controls for Japanese Beetle

Ethylene dichloride in the form of an emulsion prepared from an emulsible mixture of this compound has been demonstrated to be an effective insecticide against immature stages of the Japanese beetle. The USDA has authorized the following treatment as a quarantine measure for balled and potted plants infested with Japanese beetle larvae. The plants are to be immersed for 10 seconds in an emulsion

prepared at the rate of one gallon of the emulsible mixture to 100 gallons of water. Application of this emulsion at the rate of 2 gallons per square yard to the surface of the soil about the roots of plants growing in beds or to turf was found to kill all larvae and a high percentage of pupae. Injury to plant growth by this treatment was negligible. Arthur C. Mason, Robert D. Chisholm and Emory D. Burgess in the *Journal of Economic Entomology*, Vol. 36, No. 5, p. 734-737.

#### Mill Fumigation

Methyl bromide has been found highly efficient for the fumigation of modern mills of concrete, stone or brick. It is not recommended for use in mills built of wood or of frame and sheet metal, owing to the difficulty of holding the vapors long enough to obtain a satisfactory kill. Methyl bromide is highly toxic to all stages of insects; it is noninflammable at concentrations used in commercial practice, and it can be used successfully at comparatively low temperatures. It is the most efficient fumigant known for the treatment of warehouses filled with bagged commodities. G. A. Dean and R. T. Cotton. *U. S. Dept. Agr. Circ.* 390.

#### Diluent for Derris

Laboratory tests with pyrophyllite, flaky talc, fibrous talc and clay as diluents confirmed previous findings and showed that pyrophyllite increased the effectiveness of ground derris in ratios of three or more parts to one part of derris root. Field tests also demonstrated the superiority of pyrophyllite over clay as a diluent for derris. N. Turner. *J. Econ. Entomol.* 36, 266-72.

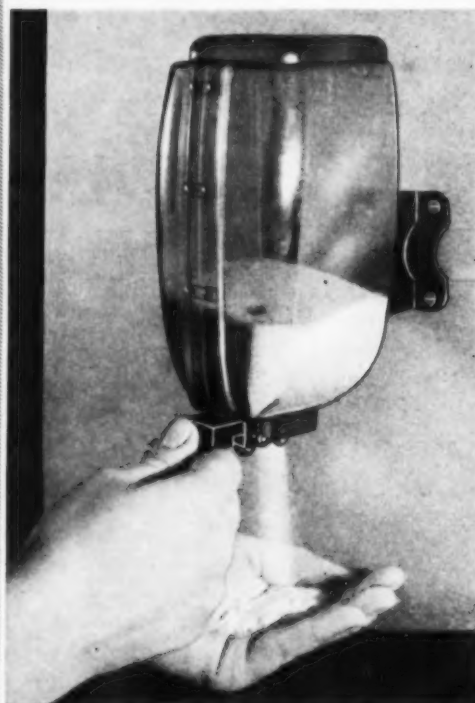
#### Sterilizing Agent

A sterilizing and disinfecting agent which will dissolve fat is made by adding a suspension of a cellulose derivative in formic acid or similar swelling liquid, to an organic fat solvent. The mixture is stirred and to it are added a fatty alcohol sulfate and a disinfectant such as formaldehyde. The whole is homogenized. W. Wilcken. German Patent No. 728,237; through *Chem. Abs.*



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## Rolstead Joins Geigy Co.

Marvin Rolstead recently associated with the sales development of insect repellents for the Skol Company, New York, has joined the Geigy Co., New York, in the sales research and development department. He will handle the sales development of DDT in the insecticide industry. Mr. Rolstead's former connections in insecticide sales include U. S. Industrial Chemicals, Inc., Rohm & Haas Co., and McLaughlin-Gormley-King Co. At the present time, all supplies of DDT are going into the manufacture of louse powder and other insecticides for the armed forces and none is available for civilian uses.

## Mackey Represents Halaby Co.

Edward A. Mackey of Edward A. Mackey & Company, 101 Park Avenue, New York City, New York, has been appointed the representative of the Samuel Halaby Company, manufacturers of sanitary products, of Rochester, N. Y., in the New York area. Mr. Mackey was formerly connected with Superior Chemical Products Corp. of Philadelphia, with whom he severed business relations as of Jan. 10, 1944.

## Biological Section Meets May 1

The Biological Section of the American Drug Manufacturers Association, Washington, is tentatively scheduled to meet on Monday, May 1, at Hot Springs, Va. Details concerning speakers and subject matter to be discussed will be released shortly.

## Hercules To Make "DDT"

Hercules Powder Co., Wilmington, has just announced that it will start manufacture of "DDT," new insecticide used in the army louse powder, in a section of its plant at Parlin, N. J. This plant is being put into operation at the direct request of the federal government, it is stated, and the entire production of "DDT" (dichloro-diphenyl-trichloro-ethane) will

be turned over to the armed forces. The new plant is expected to reach actual production in May.



Lieut. (J.G.) John Conner, formerly Washington representative of the National Association of Insecticide and Disinfectant Manufacturers, is stationed for the time being at Harvard University, Cambridge, Mass. During his absence from his office at 1251 National Press Building, Washington, D. C., his work is being carried on by John B. Gordon and C. H. Conner, including representation for N.A.I.D.M.

## J. L. Clark Born

J. L. Clark, son of H. Marshall Clark and Mrs. Clark of Ashland, Ohio, and grandson of the late J. L. Clark, formerly chairman of the board of Dr. Hess & Clark, Inc., Ashland, was born February 11 at the Ashland Hospital. The father of the new arrival, who weighed seven pounds, seven ounces, H. M. Clark, is president of Dr. Hess & Clark, Inc., widely known manufacturers of veterinary remedies and insecticides.

## Appoints West Coast Rep.

Arthur Srebnren, head of Associated Chemists, Inc., Chicago insecticide manufacturers, has just returned from a three weeks' trip through Texas and California. While in California, Mr. Srebnren announced the appointment of Marshall-Dill as Associated

Chemists' representative for California, Texas, Arizona, Nevada and Oregon. Marshall-Dill has offices in Portland, Ore., and Los Angeles, the main office being at 24 Bluxome Street, San Francisco. Complete stocks of the company's lines will be maintained in San Francisco and Los Angeles.

## New Odorless Disinfectant

Sanitary Soap Co., Paterson, N. J., has developed a new odorless disinfectant which will be sold under the name "Sasoco" disinfectant. It is odorless, described as stable under all conditions, and having a guaranteed phenol coefficient of 8. It is described as safe and non-irritating to human skin.

## New Stauffer Sulfur Plant

Stauffer Chemical Co., New York, has arranged for erection of a new branch plant for production of refined sulfur on a 20-acre site, situated on the Mississippi River, near New Orleans. Processing and manufacturing buildings and structures for storage, distribution and service are included in the construction plans.

## Silver Star To Ex-PCO

William Grant, superintendent of the service department of Protex Service, Chicago exterminating firm, received word last month that his son, William Grant, Jr., had been decorated with the silver star for bravery under fire in the New Guinea battle area. Young Grant, a private, first class in the Medical Corps, says the citation, ran forward in the face of enemy machine gun fire, to rescue a wounded soldier and returned to his lines unharmed. Before entering the army, he had been employed for a time by the Protex company.

## Western Brush Remodels

The two buildings occupied by Western Brush & Supply Co., Wichita, said to be the largest firm of its kind in Kansas, were remodeled recently, with new fronts put on the buildings. The firm, which normally manufactures disinfectants, insecticides, cleaning compounds, soap polishing cloths,

# The Paradox of Soap

or the mystery of the

## TAR ACID \* WATER INTERFACE

AS soap manufacturers we were long ago attracted to the disinfectant field. We found some strange things.

- 1—Soap can make a disinfectant raw material potent.
- 2—Too much soap can ruin a disinfectant.

Sometimes negative results in a scientific experiment are of value. We took a Tar Acid chlorinated base with an estimated phenol coefficient of 100. We made a compound using 3% of Tar Acid and 30% soap and had it tested by the F.D.A. Method. Instead of a coefficient about 2; the result was a coefficient of nil.

We infer the following theory on disinfection as derived from the above.

Ordinarily, soap emulsifies the active disinfecting ingredients in such a way as to expose the polarized phenolic molecules to the surface of the bacteria—and they perish.

When too much soap is used, the phenolic molecules are enveloped by the soap molecules, and the only polarized groups are fatty acids. Fatty acids are comparatively inert to bacteria, so the surface action on them is useless—and they survive.

This experiment is just one more demonstration of the essential point that it's the "know how" that is most important in turning out good products. The finest materials and the best of intentions aren't enough if your practical manufacturing background has any loopholes in it. Here at Clifton there aren't any such blind spots. We have the technical skill and the practical manufacturing experience as well. Get in touch with us the next time you are in the market for disinfectants, potash soaps, insecticides, deodorizing blocks, soap dispensers or other items in the sanitary chemical line.

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Liquid Soap Dispensers	Furniture Cream
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Insecti-Sol penetrates deeper—actually saturates the air, yet provides perfect, stain-free safety for clothing, rugs, drapes, curtains, etc., by evaporating entirely upon completion of the toxic action.

Full-floating, crystal clear Insecti-Sol is the perfect base for makers of Pyrethrum extract; synthetic bases for insecticides; fly and insect sprays; fumigators; exterminators.

Write Dept. 108 today for valuable information regarding Insecti-Sol and Penn-Drake Odor-Free Naphtha—the perfect base for Mothicide preparations.

### PENNSYLVANIA REFINING COMPANY

General Offices: BUTLER, PA.

Refineries at KARNES CITY and TITUSVILLE, PA.

Makers of White Oils (U. S. P. and Technical); Petrolatums (all grades and colors); INSECTI-SOL (deodorized insecticide base); Odor-Free and other Naphthas; Petroleum Sulphonates; Waxes; Industrial and Motor Lubricants and Greases; Fuel Oils and other petroleum products.



brushes, etc., was founded in Denver in 1896 by S. M. Zelinkoff, father of the present owner, Milton A. Zelinkoff. The Wichita branch became the company's home office in 1930, because of the business which developed in the southwestern states.

#### Pittsburgh PCOs Elect

G. E. Cooper of Marvella Key-spray Sales & Service Co. was elected president of the Greater Pittsburgh Pest Control Association at a recent meeting at the Hotel William Penn, Pittsburgh. Louis Gatto of Beaver Falls, was elected secretary and A. H. Helfgott of Remo Sanitation Extermination Co. was elected treasurer.

#### Predict 1944 Chinch Bug Plague

Manufacturers of insecticides for control of chinch bugs can expect a considerable increase in demand from midwestern farmers during the coming growing season, according to forecasts by agricultural authorities. Little rain or snow fell over a large area of the corn belt during the fall and winter months and drought conditions are predicted for several midwestern states next summer. Chinch bugs multiply in inverse ratio to subsoil moisture, one agricultural expert points out, in warning farmers to be prepared for the insect invasion. He predicted that conditions similar to those of the big drought and period of dust storms in 1934 will again recur this year.

#### Sonneborn Retirement Plan

An employees' retirement plan, providing for monthly pension payments as well as death benefits, has just been announced for employees of L. Sonneborn Sons, Inc., New York, oil refiners, by Dr. Ferdinand Sonneborn, president. The Sonneborn plan, all cost of which will be borne by the company, provides generally for retirement at the age of 65. Its benefits apply to all employees in income brackets above the \$3,000 Social Security limit, between the ages of 31½ and 60½, who had been with the company 30 months or more on January 28, 1943. Eligible employees in the armed services will be enrolled in the plan following their return to active service.

#### R. E. Demmon Dies at 52

Roy Earl Demmon, 52, vice-president and director of sales for Stauffer Chemical Co., New York, died suddenly Feb. 14, at Daytona Beach, Fla. A native of San Francisco, Mr. Demmon had been with Stauffer for 35 years and made his home in Bronxville, N. Y. In 1920 Mr. Demmon was appointed general manager of the company's Houston properties and assumed management of the Indiana branch in 1929. In 1936 he was appointed assistant vice-president, and director of sales in 1941, serving in that capacity until his death. He was a director of Old Hickory Chemical Co., Old Hickory, Tenn.; Cornwall Chemicals, Ltd., Cornwall, Ont.; Niagara Smelting Corp., Niagara Falls, N. Y.; Nyotex Chemicals, Inc., Houston, and the Agricultural Insecticide and Fungicide Association, New York. He was a member of the Chemists Club, the Uptown Club and the Masonic Order. Surviving him are his widow, Mrs. Betty Dewey Demmon, and a son, Roy E. Demmon, Jr., a student at Taft School, Watertown, Conn.

#### Test Fungicide Replacement

Rohm & Haas Co., Philadelphia, report that they are conducting field tests on a new synthetic fungicide which may serve as a replacement for their "Yellow Cuprocide," now unavailable because of Navy use of the essential raw material, cuprous oxide, as an ingredient in anti-fungus ship-bottom paints. Until tests on the new product are completed, or until copper fungicides again become generally available, growers who have used these products in the past to protect their crops from blight, leafspot, mildew and damping-off have been advised to seek other fungicides from their local suppliers.

#### Pest Identification Course Feb. 7-9

A course in identification of household pests for pest control operators will be conducted by the College of Agriculture, Rutgers University, New Brunswick, N. J., under the direction of Professor Frank G. Helyar, Feb. 7, 8 and 9. The course is sponsored by Rutgers University in coop-

eration with the N. J. Pest Control Association. Cost of the course is \$7.50; the first 24 registrations received will comprise the full enrollment for this session. If the demand is sufficient, the course will be repeated Feb. 21, 22 and 23.

#### Baltimore PCO Meeting

A dinner meeting of the pest control operators of Baltimore, Md., was held in that city on Feb. 3 at Dubner's Restaurant. Walter Porter of Rose Exterminator Co., presided. Guest speakers included Dr. Ferdinand A. Korff, Director, Bureau of Food Control, Baltimore Health Department, and William O. Buettner, secretary of the National Pest Control Association. Dr. Korff outlined the need for greater insect and rodent control to correct insanitary conditions existing in 10,000 Baltimore food handling establishments and pledged his support to the pest control industry to help clean up the situation. Mr. Buettner conducted an open forum of questions and answers on industry questions, particularly on means of conducting pest control work with substitute chemicals and with limited stocks of equipment. He also discussed the matter of draft deferments for pest control operators and their employees. About twenty-five were in attendance at the dinner.

#### Lt. Carleton Morris Killed

Lt. Carleton D. Morris, former vice-president of Merchants Chemical Co., Chicago, and well known in the Chicago chemical industry, was killed by a bomb in the European war theatre, according to word received by his widow last month. Lt. Morris, chief radio operator on a ship in the Merchant Marine, had been on shore leave. Accompanying a member of his party who had become ill, he returned to the ship just as the bomb scored a hit on the craft.

#### Gadi Division Moves

Gadi Co., manufacturers of shoe polishes and dyes, formerly of Memphis, Tenn., recently announced the following new address: Keystone Chemical Co., Gadi Division, 700 Benton Ave., Nashville 4, Tenn.

CHEMICALS



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### Flexibility In Crutcher Performance

The HUBER ELECTRO PERFECTION CRUTCHER offers a choice of four forward and reverse speeds. The flexibility in operating technique afforded by this wide choice of crutcher speeds should be decidedly interesting to many soap makers. Available in three sizes,—1,500, 2,400 and 3,200 pounds.



### HUBER MACHINE CO.

"Builders of Good Soap Machinery for the Past 45 Years"  
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Liquid Soaps Lotions  
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and other Chemical Specialties

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Does your product require a *certified color* under the new law? Let us advise you, and supply you with exactly the right color for the right purpose!

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"Color it for greater sales appeal."

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HIGH BOILING  
TAR ACIDS

NAPHTHALENE

TAR ACID  
CREOSOTE OIL

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ENGLAND

### Insecticide Can Grenade Base

A new anti-tank grenade, which in addition to its initial purpose to cripple enemy tanks, can also be used as a delayed-action land mine, a demolition charge, a mechanically detonated booby-trap and a hand grenade is now being made by American Can Co. and is almost identical to the one-quart, flat rectangular-shaped insecticide can, it was revealed here recently. Powerful enough to cripple the enemy's big tanks, yet small and light enough to be carried in a soldier's pocket, the grenade is rolling off production lines of an American Can Co. plant by the thousands. Because of its close similarity to the insecticide can, the grenade's design permits mass production on precision machinery. Its shape and compact structure require a minimum of storage and shipping space and facilitates handling in transit and in the field.

### Drug Mfgs. Meet May 1-4

W. W. Woodson, of the law firm of Rogers, Woodman and Rodgers, Chicago, one of the outstanding authorities in the field of trade marks in the United States, will speak before the Committee on Legislation of the American Drug Manufacturers' Association on May 1, the first day of their annual meeting, which runs from May 1-4, at the Homestead Hotel, Hot Springs, Virginia. Mr. Woodson will speak on the subject of "Trademarks in the Pharmaceutical Industry."

### Central States Moves

Central States Chemical Co., janitory supply house, formerly of 4724 Page St., St. Louis, Mo., moved recently to 4908 Delmar Boulevard, St. Louis 8.

### Owens-Illinois Has Radio Show

A radio program, "Broadway Matinee," sponsored by Owens-Illinois Glass Co., Toledo, O., and designed to give public recognition to the man in the local pharmacy is being broadcast over the Columbia Broadcasting System network Mondays through Fridays at 4 p.m. EWT. Designed to perform a wartime service to the government, as well as to customers of Owens-Illinois,

the show has featured many prominent Washington officials. Principal performer on the program is Alfred Drake, singing star of the Broadway hit "Oklahoma."

### O. G. Simpson, Oregon, Dies

O. G. Simpson, chief of the Division of Foods and Drugs, Weights and Measures of the Oregon State Department of Agriculture, Salem, Oregon, died suddenly of a heart attack in that city on February 23. Mr. Simpson had been in charge of the enforcement of the new Oregon insecticide law which has caused a country-wide controversy over the last six months, particularly among manufacturers of nationally-advertised household insecticides, and between agricultural and household insecticide groups on the Pacific Coast.

### Dr. Schweng Joins Turco

Dr. John M. Schweng, formerly chemical research engineer at Lockheed for two and one half years, has just been appointed as chemical research engineer and director of Bacteriological research for Turco Products, Inc., Los Angeles. Dr. Schweng, prior to his association with Lockheed was for three years chief chemist at Imperial Laboratories, in Los Angeles, and is credited with advances in catalytic cracking of petroleum crude and in the development of protective coatings for aluminum and magnesium alloys. A member of the American Chemical Society, Dr. Schweng took his M.D. degree at the University of Chicago, from which university he also holds a B.S. degree in chemistry.

### Bell Exterminating Moves

Bell Exterminating Co., has just announced the removal of their office, laboratory and stockrooms to 20 Hudson Street, New York 13, effective Feb. 1. Bell was formerly located at 200 Hudson Street, New York.

### Turco Moves in Chicago

Turco Products, Inc., manufacturers of cleaning materials, have just announced that their new address in Chicago is 125 W. 46th Street, Chicago, 9.

### DCAT Dinner March 9

Among the speakers addressing the 19th annual Drug, Chemical and Allied Trades Dinner, March 9, according to announcement by John J. Toohey, chairman of the program committee are: Major General William N. Porter, chief, Chemical Warfare Service; Major General Norman T. Kirk, Surgeon General, Army Medical Dept.; Rear Admiral Luther Sheldon, Jr., M. C., Surgeon General's Office, U. S. Navy; Surgeon General Thomas Par-ran, U. S. Public Health Service; Major General Clifford L. Corbin, director, Procurement Division, Office of Quartermaster General. E. T. T. Williams, chairman of the Drug, Chemical and Allied Trades Section of the New York Board of Trade, Inc., is toastmaster. The dinner, which is being held at the Waldorf-Astoria Hotel, is a tribute to the drug and chemical industry for its part in the war effort, and particularly in recognition of its aid to the military and public health of the allied countries. A reception is being held from 6 to 7 p.m., with dinner scheduled to be served at 7:30 p.m. Dress is "black tie" and tickets are \$12.50 each. More than 2,000 reservations had been placed nearly two weeks before the dinner.

### Hedlund Joins Household Chemists

Charles O. Hedlund was recently appointed sales manager of Household Chemists, Inc., New York, makers of "Shyn-O-Way," fabric shine remover. He was formerly associated with Lehman Bros. and Goldman-Sachs, New York, and recently completed two years in government service, his latest association having been with the Smaller War Plants Corporation.

### Chicago Branch for Calo

The John H. Calo Co., manufacturers agent for resins, naval stores and oils, has just opened a Chicago branch at 43 East Ohio St., with J. J. Funsch as resident manager. Philip E. Calo, formerly Chicago manager for Newport Industries, Inc., has recently joined the Calo organization.



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A changed formula makes possible discontinuance of its lemon odor. We have on hand:

**500 POUNDS**

Lemon Oil SF 3787

Made by George Lueders & Co.

**1000 POUNDS**

Lemon Odor C. A.

Made by Albert Verley & Co.

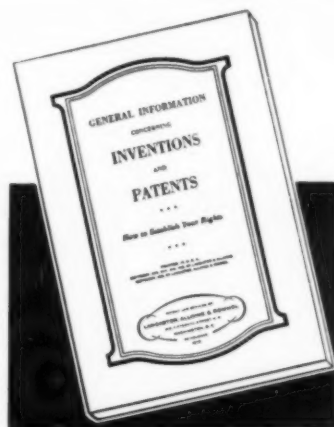
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**MILITARY  
CAMPS  
PROVIDE  
PROPER  
SANITATION**

with

**ADAM A. BREUER'S  
ELECTRIC INSECTICIDE SPRAYERS**

*Portable — Fast — Efficient*

PROTECTING the health of the armed forces thru proper sanitation in War Camps is an essential step. Consequently, such camps are adopting the rapid, efficient, portable method of spraying insecticides, namely, the Adam A. Breuer's ELECTRIC INSECTICIDE SPRAYER. It sprays insecticides for killing insects, vermin, etc. It shoots liquid a distance of twenty feet, thus proving its powerful, effective action. Write for complete details, specifying your problems and how many Sprayers you will require.

(We do not sell insecticides. Our business is the manufacture of Sprayers. (Patented in U. S. A. and foreign countries.)

**BREUER ELECTRIC MFG. CO.**  
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**COAL TAR PRODUCTS  
ACTIVATED CARBONS  
PYRETHRUM EXTRACT  
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**CHEMICAL SALES  
CORPORATION**  
PITTSBURGH 19, PENNSYLVANIA

### American Home Foreign Unit

Formation of a new foreign division of American Home Products Corp., New York, and election of Donald C. Townley as a vice-president



D. C. TOWNLEY

in charge of the division was announced Mar. 1. The move consolidates all foreign companies and export business into an operating division on a par with the five other operating divisions of the corporation. Approximately one-sixth of the corporation's business is in its foreign operations.

Since 1932, Mr. Townley has assisted the president of American Home Products Corp. in handling all the foreign business of the company. In 1935 he was made assistant to the president in charge of foreign operations. He is a graduate of Yale University, and joined Kolynos Co., an American Home subsidiary, in 1920. Following the merger of Kolynos Co. with American Home in July, 1928, Mr. Townley was appointed general manager, vice-president and director of Kolynos Co.

The foreign business of Kolynos Co. has long been the backbone of the corporation's overseas operations. Kolynos has acted as export agent for Wyeth, Inc., Boyle-Midway, Inc., and other of the corporation's subsidiaries. Prior to the war, Kolynos Products were sold in 86 foreign countries.

### Thoro Exterminating Moves

Thoro Exterminating Co., New York, recently moved to new and

larger quarters at 1 West 125th Street, New York 27. In addition to its regular exterminating service, the company will carry a full line of exterminating and sanitary supplies for the retail trade.

### Simanton of Gulf Injured

Dr. William Simanton, entomologist for the Gulf Research & Development Co., a branch of the Gulf Oil Co., Pittsburgh, was recently released from the New Kensington Hospital, New Kensington, Penna. and is recuperating at his home from the effects of an automobile crash on Feb. 2. While driving to his home from the Gulf Harmarville Laboratory, his car was struck by a large trailer truck. He was knocked from his car and pushed for sixty feet down the road under the locked wheels of the truck. He was rushed unconscious to the hospital and has been confined there for the past month. In charge of all insecticide technical developments for Gulf for a number of years past, he is well-known in the insecticide industry for his cooperative scientific research and his activity on N.A.I.D.M. committees.

### Terminology of Insecticides

The "Terminology of Insecticides, Fungicides and Other Economic Poisons" is discussed at length by Dr. Alvin J. Cox, Chief of the Bureau of Chemistry, California State Department of Agriculture, in an article in the December, 1943 issue of the *Journal of Economic Entomology*. Dr. Cox reviews the need for clear, precise and adequate technical language in describing these products, not only because of its importance to manufacturers and users, but also as an aid to entomologists, plant pathologists, etc.

### Bell Exterminating Moves

Bell Exterminating Co. recently announced the removal of their office, laboratory and stockrooms to 20 Hudson St., New York 13.

### New Disinfectant

Hydroxamic acids are used as disinfectants and preservatives. K. Hamann and O. Pauli. German Patent No. 729,204.

### Sanitary Supply Assn. to Meet

In connection with its twenty-second annual convention, to be held April 24, 25 and 26, at the Hotel Morrison, Chicago, the National Sani-



M. L. MAGEE

tary Supply Association has just announced that exhibition space for manufacturer members will be provided in the Mural Room and adjoining parlors. The displays, the announcement states, will be erected in the form of a horseshoe around the outer walls of the Mural Room, scene of the convention, and the adjoining parlors. Allotment of space for the exhibitions will be made through a drawing by lot to be conducted by a committee of members in charge of the exhibition.

Marshall L. Magee, of T. F. Washburn Co., Chicago, is president of the National Sanitary Supply Assn., and Harry Apple is secretary. Information regarding reservations should be forwarded to Mr. Apple at 407 E. Michigan St., Milwaukee 1, Wisc.

### New Members of NAIDM

The following three firms have just been elected to active membership in the National Association of Insecticide & Disinfectant Manufacturers: American Oil Co., Lubricating Dept., John Crowther, Manager, P.O. Box 507, Baltimore 3, Md.; The Bordman Company, M. A. Bordman, President, Umbria and Lemonte Sts., Manayunk, Philadelphia 27, Pa.; Chemco Co., M. H. Solworth (Owner), 2934 Cleveland Blvd., Louisville 6, Ky.



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**ROSINS**

They will help  
the soapmaker  
"stretch" his fats.

**CROSBY NAVAL STORES, INC.**  
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We specialize in originating products  
to meet unusual perfume require-  
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136 Liberty Street New York 6, N. Y.

We announce development of new type soap  
colors

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They have good fastness to alkali. light.  
tin, ageing.

The following shades are already available:

Bright Green	Dark Brown
Olive Green	Palm Green
Yellow	Golden Brown
True Blue	Violet

*It will pay you to send  
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**PYLAM PRODUCTS CO., INC.**  
Manufacturing Chemists, Importers, Exporters  
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## Peck's OIL SOAPS

DELAYS . . . In spite of war demands, raw mate-  
rial and other difficulties. PECK'S PRODUCTS  
is still doing its utmost to supply promptly the  
needs of its regular customers. Delays in delivery  
are beyond our control, and we ask our old  
customers to bear with us under present condi-  
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PECK'S Oil Soaps and other soap specialties,  
disinfectants, floor waxes . . . a full line of  
sanitary specialties manufactured by PECK for  
sanitary specialists.

**Peck's** 5224-40 NORTH 2nd ST., ST. LOUIS, MO.  
NEW YORK . . . KANSAS CITY  
**PRODUCTS COMPANY**

*Everything in Soaps, Disinfectants, Waxes, Etc.*



## Army Announces New Insect Repellent

A NEW insect repellent, which, according to an Army Service Forces press release, can be credited with at least "half of the glory due to modern malaria fighters," was announced Feb. 22 by the Jersey City Quartermaster Depot. Only recently perfected, the new formula has not yet been made public, but it is said to combine the active ingredients of the two types of repellent now in use, together with certain other ingredients which make it effective against nearly all kinds of flying insects. It is expected to replace all of the older types of repellents in 1944, according to the press release. In the first two months of 1944, many million two-ounce bottles were purchased by the Army Quartermaster Depot. The two-ounce bottles were found most practical for individual use and the bottle is made with a shaker top which releases one drop at a time. Each man shakes about 12 drops into one hand, rubs the hands together, and then applies a thin layer to all areas of exposed skin as well as on clothing where insects might bite through.

Certain repellents, according to the release, are effective against some types of mosquitoes, but equally ineffective against others. Neither of the two common mosquito repellents prove useful in combating flies. Thus, these three ingredients go into the compound now being purchased. Combination of the three ingredients makes it possible to use the same product in all fields of operation, and at the same time, simplifies supply and distribution. In tropical climates two to four hours protection is offered with one application of this compound, while in a temperate zone, one application may prove effective for as long as 24 hours.

In discussing the effectiveness of the repellent, it was pointed out that it does not extend for any great distance. Mosquitoes have been observed to approach within a half inch of the protected skin area before veer-

ing off. Even if they don't bite, insects flying around the face and eyes cause untold annoyance, and the search is continuing for a compound which will be effective for greater distances.

### Allocate Trichloroethylene

Trichloroethylene and perchloroethylene were placed under allocation by the War Production Board, it was announced late last month. Under order M-371, allocations have been established for all producers and distributors, except distributors who sell the chemicals only in quantities of a 52-gallon drum (700 pounds) or less per month. Customers are required to file certified statements of end use with purchase orders when ordering 700 pounds or more of these materials for delivery by all suppliers in any calendar month. After March 1, no supplier will be permitted to make deliveries of the chemicals except to persons specifically authorized in writing by the WPB. Deliveries to customers ordering 10,000 pounds of the two chemicals combined will be individually authorized, while deliveries to customers ordering between 700 and 10,000 pounds per month will be authorized on the basis of certified end uses. Lump sums will be allocated to each end use for orders of the latter type, without specifying individual customers' names. Deliveries to customers ordering 700 pounds or less of the two chemicals combined will be authorized by allocating a lump sum without specification of either name or end use. Use by suppliers is also restricted to that specifically authorized.

### Lifts Insecticide Restrictions

Two restrictions on arsenical insecticides were eased by the WPB early last month. Sales and use of arsenical insecticides for protection of shade trees, nurseries, lawns and golf courses is now allowed. Restrictions on the use of steel drums for arsenical insecticide shipments also were removed. Manufacturers are now permitted to use

minimum gauges, 26-gauge being agreed on for 100-pound drums. However, manufacturers and shippers have been asked to use up fibre containers now on order before switching over to steel drums. Drums will be authorized on the basis of calendar quarterly needs.

### Exhibitors at School Conference

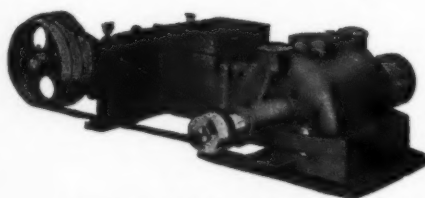
Exhibiting at the Wartime Conference of the American Association of School Administrators of the National Educational Association of the United States, held at the Hotel Pennsylvania, New York, February 22 to 24, were the following firms from the fields of soap and sanitary chemicals: Burroughs Wellcome & Co. (U.S.A.), New York, who featured a number of first aid kits from the company's line, including the "Tabloid" first aid kit. Attending the Burroughs Wellcome exhibit were Cecil R. Brown, P. J. Wyler and James Madden. C. B. Dolge Co., Westport, Conn., exhibited some of their building and ground maintenance supplies. C. A. Skinner was in charge of the exhibit. Finnell System, Inc., Elkhart, Ind., showed some of its line of Finnell electric floor machines for waxing, polish and scrubbing; finishes, waxes, cleanser and floor maintenance equipment and supplies. H. L. Potter attended the exhibit. The Hillyard Co., of St. Joseph, Mo., featured such items as floor seals, finishes, waxes, cleaners, scrubbing and polishing machines, steel wooling machines, and maintenance and sanitation products and supplies. Elliott C. Spratt was in charge of the display. Wyandotte Chemicals Corp., Wyandotte, Mich., showed such products from its line as cleaning materials for industrial and commercial use. Harry A. Rightmire, Cyrus Nicholas and John L'Ecuylor were on hand to demonstrate the company's products.

Water-soluble preparations containing rotenone for pest control are prepared by heating rotenone extracts in ethyl alcohol together with an alkyl- or aralkyl-naphthalene-sulfonic acid. I. G. Farbenind. A.-G. German Patent No. 729,163; through *Chem. Abs.*

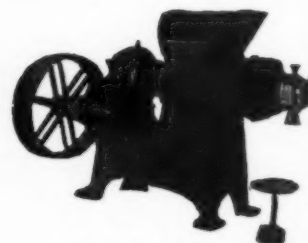
*Special Offerings of* **SOAP MACHINERY** *Completely Rebuilt!*



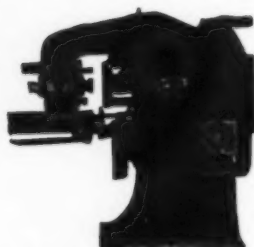
Newman's BRAND NEW  
Steel Steam Jacketed  
SOAP CRUTCHERS  
Sizes 1,000 to 10,000 lbs.



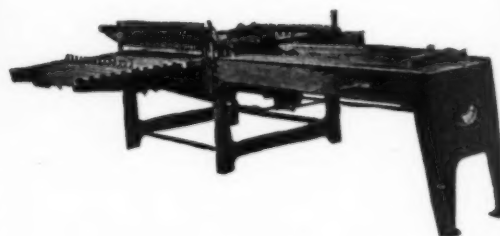
SOAP POWDER MILLS  
Sizes 10A and 14



Single screw soap plodders  
with 6, 8, 10 or 12 inch screws.  
All completely rebuilt and  
unconditionally guaranteed.



4 JONES AUTOMATIC com-  
bination laundry and toilet  
soap presses. All complete  
and in perfect condition.



2 Automatic Power Soap Cutting Tables.

**INVESTIGATE  
THESE SPECIAL  
BARGAINS**

Johnson Automatic Soap  
Chip Filling, Weighing  
and Sealing Machines  
for 2 lb. and 5 lb. Pack-  
ages guaranteed in per-  
fect condition.

**ADDITIONAL REBUILT SOAP MACHINERY**

*All used equipment rebuilt in our own shops and guaranteed first class condition.*

H-A, 1500, 3000, 4000, 5000 lbs. capac-  
ity. Steam Jacketed Crutchers.

Dopp Steam Jacketed Crutchers, 1000,  
1200, 1500 lbs. and 800 gals. capacity.

Ralston Automatic Soap Presses.

Scouring Soap Presses.

Empire State, Dopp & Crosby Foot  
Presses.

2, 3, 4, 5 and 6 roll Granite Toilet  
Soap Mills.

H-A 4 and 5 roll Steel Mills.

H-A Automatic and Hand-Power slab-  
bers.

Proctor & Schwartz Bar Soap Dryers.  
Blanchard No. 10-A and No. 14 Soap  
Powder Mills.

J. H. Day Jaw Soap Crusher.

H-A 6, 8 and 10 inch Single Screw  
Plodders.

Allbright-Neil 10 inch Plodders.

Filling and Weighing Machine for  
Flakes, Powders, etc.

Steel Soap frames, all sizes.

Steam Jacketed Soap Remelters.

Automatic Soap Wrapping Machines.

Glycerin Evaporators, Pumps.

Sperry Cast Iron Square Filter Presses,  
10, 12, 18, 24, 30 and 36 inch.

Perrin 18 inch Filter Press with  
Jacketed Plates.

Gedge-Gray Mixers, 25 to 6000 lbs.  
capacity, with and without Sifter  
Tops.

Day Grinding and Sifting Machinery.

Schultz-O'Neill Mills.

Day Pony Mixers.

Gardiner Sifter and Mixer.

Proctor & Schwartz large roll Soap  
Chip Dryers complete.

Doll Steam Jacketed Soap Crutchers,  
1000, 1200 and 1350 lbs. capacity.

Day Talcum Powder Mixers.

All types and sizes—Tanks and Kettles.

Ralston and H-A Automatic Cutting  
Tables.

Soap Dies for Foot and Automatic  
Presses.

Broughton Soap Powder Mixers.

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**Sales Agent** desires connection with responsible companies, distribution and sales of sanitation chemicals and insecticides, upholstery shampoo, floor wax, disinfectants, polishes, soaps, etc. Call on hospitals, hotels, office buildings, industrials, schools. Fifteen years actual experience, can produce. Interested only in Chicago and surrounding territory. Address Box No. 670, care *Soap & Sanitary Chemicals*.

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**Assistant Chemist** for Vegetable Oil Refinery in California. Initial compensation adequate, good prospects for right person. Reply by mail only stating qualifications, references to Room 2401, 21 West St., N. Y. C. 6.

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**CHEMIST WANTED:** Metropolitan New York plant. Must be familiar with liquid soaps, disinfectants, and floor waxes. State age, experience, and salary desired. Address Box No. 682, care of *Soap & Sanitary Chemicals*.

## Miscellaneous

**For Sale:** Coconut Fatty Acids 20,000 lbs. at ceiling price and 20,000 lbs. coconut soap in bulk. Write immediately Address Box 681, care *Soap & Sanitary Chemicals*.

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**Floor Brushes** — We manufacture a very complete line. Catalogue sent upon request. Flour City Brush Company, Minneapolis, Minn., or Pacific Coast Brush Co., Los Angeles, Calif.

**For Sale:** 2—5 Roll water cooled inclined steel roller mills, 16" dia. x 40" face. Houchin-Aiken Foot Presses; Soap Frames; Cutting Tables; Plodders, 12 x 30 and 16 x 40 Three Roll Water Cooled Steel Mills; 4 Roll Stone Mills; Dryers; Chippers; Powder Fillers; Mixers; Grinders; Filter Presses; Disc Filters; Pumps, etc. Send for Soap Bulletin No. 402. We Buy Your Surplus Equipment for Cash. Stein Equipment Corporation, 426 Broome Street, New York City, 13.

**Wanted:** Will buy outright or on a royalty basis proven formulas covering Toiletries, Household Chemical Products, in liquid creams or powder formulations. Give complete details, selling price and cost of product, distribution, if any, and your fee. C. A. Englert, 44 McKnight St., Pittsburgh 20, Pa.

**For Sale:** Dopp 1,000 lb. Jacketed Crutcher; 4 Foot Operated Presses; Soap Kettles; 2 Jones Presses; 2 Package Machinery Co. Wrappers; Fillers; Labelers Pumps; Tanks; etc. Your inquiries solicited. Brill Equipment Company, 183 Varick St., New York 14, N. Y.

**Wanted:** One U. S. Automatic Rotary Rinser, or other bottle washer, with motor attachment, in good condition. Address Box No. 675, care *Soap & Sanitary Chemicals*.

**Insecticide Business:** Wanted to purchase for cash small going firm manufacturing insecticides, disinfectants, and allied products sold in farm and rural areas. Small organization with established brands and equipped factory preferred. Send details in confidence to Box No. 667, care *Soap & Sanitary Chemicals*.

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BRAID-O-PAD has steel wool strands running in all directions, and these strands are continually presenting fresh cutting surfaces. During the entire life of this pad, there is no loss of efficiency. This is because the pad retains its original shape and the braided strands of steel wool remain in the same relation to each other at all times during its use.



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Specialists In Rotenone Roots and Rotenone Products

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Every effort is made to keep this index free of errors, but no responsibility is assumed for any omissions.



"Every time ah mentions dem two-bits wat yo' owes me, Cuthbert, yo' suffers a relapse ob memory!"

## Bad memory...

**O**NE of the easiest things which people do is to forget . . . and this is particularly true if you have not been selling them lately due to war restrictions . . . by the time the war is over you and your products may not even be a memory to them . . . but you can bridge these memory lapses by constantly reminding them now of your firm and products . . . through regular advertising in representative trade publications . . . for example, if you want to bridge any lapses of memory in the field of soap products and detergents, insecticides, disinfectants and chemical specialties, we suggest regular advertising in

**SOAP and Sanitary Chemicals**  
254 WEST 31st STREET NEW YORK 1

*Member Audit Bureau of Circulations*

## Tale Ends

**O**IL-BEARING crops yielded American farmers 70 per cent more income in 1943 than in 1942, says the U. S. Department of Agriculture. New acreage apparently accounted for most of the gain. And it is not unlikely that 1944 will see a further increase. Viewing the oil and fat situation in this light, our big stock pile begins to take on something of the shape and hue of a white elephant. It would also seem that the magic wand of high price once again displays its might as a production stimulant.

Signs of the times . . . advertising of soap sales by department stores appears to have made its appearance in daily newspapers on a somewhat broadened scale during the past month or six weeks . . . but like some whiskey advertising, a number of new brands are noted.

The Surgeon General's office of the Army still treats DDT insecticide research findings as a military secret. In view of the fact that the Germans made and used this product before we did, isn't this continued hush-hush business becoming a trifle ludicrous?

The shortest thing in America today is not coconut oil or pyrethrum or trisodium phosphate, but manpower. Accordingly if some 9,999 forms of one kind or another which must be filed by manufacturers, et al, with WFA, WPB, OPA, WMC, CCC, OWI, etc., etc., many of which have become outmoded by developments or which never did serve any useful purpose, could be eliminated, think of the thousands of man-hours which would be saved. But bureaus without forms-to-fill-out would be almost like corned beef without cabbage.

Another sign of the times . . . our paper supply tells us that we don't want new subscribers to *Soap & Sanitary Chemicals*. If anybody had told us ten years ago that we would boldly make a statement of this kind in 1944, we would have promptly called for the wagon from the nut-house.

Specify **SOLVAY**  
TRADE MARK REG. U. S. PAT. OFF.

# 49-50% LIQUID tank car CAUSTIC POTASH

... the economical buy that  
gives you—

★ MORE POTASH—LESS WATER

★ LESS IRON

★ LESS TURBIDITY

★ LESS WATER IMPURITY



Why take *less* when you can get **MORE!**... especially in these days of shortages and substitutes. Profit and quality-minded Potash soap manufacturers get **MORE EXTRA** quality advantages by specifying **SOLVAY 49-50% Liquid CAUSTIC POTASH.**

They get **MORE** Potash than water... *less* iron... *less* turbidity... and *less* water impurity. Plus

the highest standards of purity and uniformity maintained for more than 60 years—your assurance of dependable **EXTRA** quality advantages.

Get **MORE** for your money!—specify **SOLVAY 49-50% Liquid CAUSTIC POTASH.** Prompt shipments in tank cars. Also available in returnable drums standardized at 45% KOH.

SOLVAY Caustic Potash in **SOLID, FLAKE** and **GROUND**—in convenient size containers

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Here's a quick, easy way to make your fly spray more attractive and much more in demand. Just add BOCENE, the amazingly effective deodorant that completely neutralizes the odor of Lethane, Kerosene, Pyrethrum and Thanite. BOCENE does two jobs at once. As it neutralizes the unpleasant chemical odors, it also adds a pleasing flower note to the spray. BOCENE is especially economical because a little goes so far. Only 0.05% (1/16 oz. or 2 cc) is needed for a full gallon of finished spray—at a cost of approximately 1.5¢ per gallon. Write us today for complete prices and further details.

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